

MINISTRY OF TREASURY, ECONOMICS & INTERGOVERNMENTAL AFFAIRS

HALDIMAND-NORFOLK STUDY

THRESHOLD OF CHANGE 1· LAND & DEVELOPMENT

CAZON
TR 70
-72 T311

HALDIMAND-NORFOLK STUDY URBAN & INDUSTRIAL DEVELOPMENT

LEGEND

MAJOR URBAN DEVELOPMENT

Existing

Initial

For "Lynn" read
"Woodhouse New Town"

Possible Future



INDUSTRIAL

Major Initial



Major Future



Minor



Lynn Industrial Area



Strategic Reserves of Construction
Material



Regional Sewage Treatment Plant



Regional Water Treatment Plant



Expressways



Main Roads



Railways



Stelco



Hydro



Texaco



HALDIMAND-NORFOLK STUDY

NATURAL RESOURCES & RECREATION





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Threshold of Change: (1) Land and Development

A Report to the Minister of Municipal
Affairs of Ontario on Planning in the
Haldimand-Norfolk Area

Haldimand-Norfolk Study
1971

Published by the Haldimand-Norfolk
Study

First Edition 1971
Second Edition 1972

Haldimand-Norfolk Study
Ontario Department of Municipal Affairs
801 Bay Street
Toronto 181, Ontario



ONTARIO

Office of the Treasurer of Ontario

May, 1971

Honourable Dalton Bales, Q.C.
Minister of Municipal Affairs

Dear Mr. Minister:

I am pleased to present to you my recommendations concerning future physical development and the use of land in the Counties of Haldimand and Norfolk, and related matters. I hope and believe that the adoption of these recommendations by the Government would not only bring about long-term economies in public expenditures, but, more importantly, would mean that the impending changes in the two counties would bring benefits instead of burdens to their citizens, present and future.

Though I take full responsibility for this report, I have been heavily dependent on the assistance of others. In particular I wish to acknowledge:

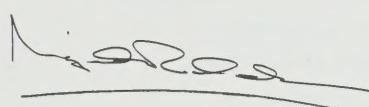
the advice, tolerance and friendship of the members of the Haldimand-Norfolk Joint Study Committee and of many other individuals in the two counties, and the consistent cooperation of the Committee itself throughout this first phase of the Study, as well as its formal recommendations;

the information, suggestions and guidance, and in many cases the long hours of effort, contributed by experts from a dozen or more departments and agencies of the Provincial Government and also from the Federal Government and the private sector. Without their help my task would have been impossible;

finally, the work of my best critics and severest friends, my colleagues on the staff of the Haldimand-Norfolk Study. While all have played important roles in the preparation of this report, I wish to pay particular tribute to the special contributions of Mrs. Eva Samery, who virtually single-handed provided its entire economic and statistical basis; and to Mr. E. F. Grove, the Assistant Study Director, who provided the essential input of solid local knowledge as well as deserving most of the credit for our effective and harmonious relations with the Joint Study Committee and the county and local councils.*

To all of them, my warmest thanks.

Respectfully submitted,



N. H. Richardson,
Study Director.

*I wish to add to these acknowledgements by extending to Miss Karin Lenman of the Department of Municipal Affairs my deep appreciation for her extremely hard and competent work, both in editing this report and in preparing the condensed version (published separately).

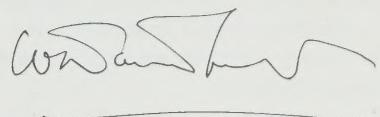
N.H.R.
July, 1972

July, 1972

This report has been given thorough study by the Government of Ontario since it was presented over a year ago. As a result, certain basic decisions have been made which will have a great influence on the future development of the Haldimand-Norfolk area. Some decisions, however, remain to be made arising from the recommendations of so comprehensive a report, and I hope that the Government will receive the advice and cooperation of the citizens and elected representatives of the two counties in resolving these issues. I hope also that the report will be of assistance to municipal councils in their own decision-making.

Policies and programmes based on the recommendations of the Haldimand-Norfolk Study will affect the future of many thousands of people. I commend the report to your most careful study, and ask for your opinions on it.

I wish also to take this opportunity to thank and congratulate the Haldimand-Norfolk Joint Study Committee for its invaluable contribution to the work of the Haldimand-Norfolk Study.



W. Darcy McKeough,
Treasurer of Ontario.

Preface to Second Edition

The original version of this report was submitted to the Minister in 1971 for the guidance of the Ontario Government. This edition, printed for public release, has been altered from the original in certain minor respects only, to bring the text up to date in relation to recent changes in circumstances and to correct certain minor errors. *There are no differences in substance between this edition and the original.*

The statistical data and forecasts have not been altered. They do not allow for any recent changes which the various industries may have made in their plans, since as far as is known the assumptions stated in the report, on which the forecasts and recommendations are based, remain substantially valid.

The proposed new town was referred to in the first edition as "Lynn". In this edition it is called "Woodhouse New Town", although the reference on Map 1 is still to "Lynn".

To avoid confusion, Provincial Government departments and agencies are referred to as they were at the time of the submission of the original report, though in certain cases they have since been reorganized. In general, for the purposes of this report:

references to the Departments of Municipal Affairs and of Treasury and Economics now apply to the Ministry of Treasury, Economics and Intergovernmental Affairs;

references to the Departments of Highways and of Transport (Provincial) now apply to the Ministry of Transportation and Communications;

references to the Department of Energy and Resources Management now apply to the Ministry of the Environment;

references to the Departments of Lands and Forests and of Mines and Northern Affairs now apply to the Ministry of Natural Resources.

Haldimand-Norfolk Study Staff, 1970

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Haldimand-Norfolk Joint Study Committee, 1970

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Township of Sherbrooke.

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Fold-Out Maps in Pockets

Map No. 1/Urban and Industrial
Development

Map No. 2/Natural Resources and
Recreation

Map No. 3/Transportation and Service
Corridors

Map No. 4/General Plan

"I hate to live in a dumpy area with a jumble of factories and a lot of pollution . . . this is degrading. Progress can be combined with the principle of quality . . . I would like to see the community atmosphere maintained and incorporated into the overall picture."

"I would like to maintain a small-town atmosphere in an economically large community."

"I was walking along the creek and watching it run . . . it was absolutely quiet, except for the birds singing and the wind rustling through the leaves . . . a blue sky with the sun just coming through a cloud . . . that's beautiful, there's nothing like it."

"I don't like to see all the old buildings torn down and put up new . . . let's retain some of our own heritage."

Citizens of Haldimand and Norfolk

1/The Plan for Haldimand-Norfolk: Objectives, Concept, Summary

1.1 The Objectives of the Plan

The purpose of this plan is to maintain and enhance the quality of the environment for living in the Counties of Haldimand and Norfolk in a period of rapid growth and change.

The plan is based on three broad *principles* and is intended to achieve seven more specific *objectives*. The three principles are:

1) Consistency with Provincial planning policies. Planning for Haldimand-Norfolk must be in harmony with broader Provincial and regional plans and designed to achieve the purposes of those plans, as set out in the White Paper *Design for Development* (Phase One, 1966);¹ in *A Strategy for Southwestern Ontario Development*, 1970; and in the *Designs for Development* for the Niagara and Erie Regions.

2) Maximum opportunity. The plan must be devised to provide the people of the area – present and future – with a wide range of opportunity and choice in employment, in living environment, in education and other community services, in housing, and in the use of leisure time.

3) Flexibility and adaptability. In an era of rapid social, economic and technological change, future circumstances and needs cannot be predicted with confidence. So, while certain principles must remain *inviolate*, the plan must have the greatest possible built in capacity to adapt to new conditions.

Subject to these basic principles, the specific objectives of the plan are:

4) Orderly and economical urban growth in the interests of the efficient use of land and the reduction of service costs.

5) Creation of a system of urban centres of varying size and function to provide a sound framework for human development by making available a range of community services, respecting the natural environment, and reducing problems of air and water pollution to a minimum.

6) Allocation of industrial development to locations suited to the needs of the various types of industry while protecting residential and agricultural areas from adverse effects.

7) To enable and encourage the provision of both an adequate supply of housing, diversified in type, cost and setting, and related community facilities.

8) To facilitate the planning and phasing of systems of transportation and trunk linear services (including pipelines of all kinds, and hydro transmission lines) in a manner consistent both with the requirements of the services and with the other objectives of the plan.

9) Maintenance of a viable agricultural economy and protection of good agricultural land from unnecessary or premature conversion to other uses.

10) Preservation of those areas and features, natural and man-made, which are among the cultural, historic, aesthetic or scientific resources of Ontario.

1.2 The Plan Concept

Application of these principles and objectives led to the development of a planning concept in which the following are the key points (Map 4).

1) Probably by about 1980, depending on the pace of industrial development, urban growth needs will require the creation of a substantially new urban centre which is likely to reach a population of 150,000 some time between 1986 and the end of the century, again depending on the industrial growth rate. This new centre should be located largely in Woodhouse Township.

2) Probably through most of the 1970's at least, urban growth needs can be met mainly through expansion of existing communities. This expansion should continue, parallel to the development of the new centre, to the extent needed to maintain a balanced urban system.

The development of compatible industries in or near existing urban communities should be encouraged to provide local employment opportunities.

3) Large-scale and "obnoxious" (major) industries should be confined for the present to the Nanticoke area. The extent of new major industry in Haldimand-Norfolk will have to be determined in the context of the Provincial Regional Development Programme; if additional development of this nature takes place it should continue to be mainly within the Nanticoke area.

4) In the triangle defined approximately by Highway 24, Otter Creek and the lakeshore, "urban" land use should be confined to the expansion of existing communities and to planned and strictly controlled "country estate" and cottage developments. With the preservation of the ecosystem as a central objective, a long-range, phased programme should be initiated for the acquisition by public agencies of key areas and features for conservation, preservation and, in some cases, recreational development, throughout the Study Area. A parkway system is proposed.

5) Since most of the land area of Haldimand-Norfolk will not be used for urban or industrial purposes in the foreseeable future, all possible measures should be taken to strengthen the economic viability of both agriculture and forestry.

¹Out of print.

1.3 Summary of Major Recommendations

Firm land use policies should be adopted to promote a climate of stability and confidence in agriculture.

6) A carefully planned corridor will be required to accommodate a new limited-access highway and various other linear services connecting the Nanticoke and Hamilton areas. The corridor concept may not apply to the construction of major linear services traversing the Study Area east-west; but such services should in general follow routes either across the northern part of Norfolk and the middle of Haldimand, or near the present CNR line and Highway 3.

7) Proposals for implementation are in a sense interim, pending completion of the local government review phase of the Study. The plan should be adopted as policy by the Provincial Government, so that it will thereafter govern all Provincial programmes in the area. It is likely that before large-scale growth begins to take place, a more effective system of local planning will have been made possible by the restructuring of municipal government. Meanwhile, however, interim arrangements will be needed for the continuation of the planning process. In any case a coordinator will be needed to ensure that Provincial policies are adhered to and to facilitate the integration of local and Provincial planning.

The establishment of a new town development corporation is proposed, together with the creation of interdepartmental committees on environmental management and for the coordination of transportation and services planning in the Study Area.

A. Urban Strategy (Report Chapter 4)

Government Decision Required for Policy Direction

Approval of the concept of a hierarchy of urban places focused on a new major urban centre ("Woodhouse New Town") in Woodhouse Township.

Programmes and Actions Required

either

Immediate site acquisition for Woodhouse New Town (S. 4.2.3)

or

Measures required to protect the site effectively for future acquisition and use as recommended, including prevention of incompatible development and of land cost inflation. (L)² (S. 4.2.3)

Early acquisition of key conservation/recreation areas, notably lakeshore lands and the Lynn River and Black Creek valleys. (S.4.2.3)

Review of all relevant local official plans, development plans and land use and division controls to ensure consistency with the Woodhouse New Town proposal. (S. 4.2.3)

Study of adequacy of water quality control on the Lynn River. (S. 4.2.3)

Study of the financial implications of the Woodhouse New Town plan for Woodhouse Township. (S. 4.2.3)

Preparation of a site development plan based on principles discussed in this Report. (S. 4.2.3)

Initiation of planning for Woodhouse New Town timed to enable the townsite to accommodate about 6,000 people by 1981. (S. 5.3)

B. Urban Development Tactics, Services and Housing (Report Chapter 5)

Government Decision Required for Policy Direction

Approval of the recommended urban development concept as the basis for the planning of regional services.

Approval in principle of special financial assistance for local services.

Approval in principle of special measures relating to the hamlet of Nanticoke.

Programmes and Actions Required

Planning of a regional servicing system to be in operation by the late 1970's. (S. 5.3)

Review of servicing in existing communities and, where necessary, provision of special assistance to enable them to meet short-term growth needs, including water supply, sewage disposal and garbage disposal. (S. 5.2.1)

Restriction of the development of the hamlet of Nanticoke, and progressive acquisition of property, initially on voluntary sale. (L) (S. 5.3)

Strict control of severances coupled with a special study of rural non-farm development. (S. 5.4)

Restriction of new cottage development coupled with a special study of the existing cottage areas. (S. 5.4)

New potential focal points of development in rural areas to be discouraged. (S. 5.4)

Initiation of discussion on meeting housing needs, among planning, financing and development agencies. (S. 5.5)

Early initiation of programmes to relieve short-term housing needs. (S. 5.5)

C. Industrial Development (Report Chapter 6)

Government Decision Required for Policy Direction

Determination of the desirable extent of "megascare" industrial growth in the Haldimand-Norfolk area.

Approval of general industrial location principles recommended in this Report.

Programmes and Actions Required

Effective measures for control of scale and location of "high growth impact" industries. (L) (S. 6.3)

Zoning to control location of high environmental impact industries, coupled

²In all cases, (L) indicates new legislation will or may be needed.

with strict enforcement of air management controls. (S. 6.3)	those areas now in other kinds of use, except in accordance with plans approved by the Government.	Preparation of a comprehensive plan for the Grand River valley, including recreation, residential use, agriculture and other open space uses, parkway planning, and appropriate services and facilities. (S. 7.4.2)
Confinement of major manufacturing industries to the Nanticoke area pending basic policy changes. (S. 6.3)	Statement of recognition of the significance of the major natural, recreational and historical features of Haldimand-Norfolk as a provincial resource and approval of their preservation (by public acquisition where necessary) and development as a basic objective in the over-all development of the area.	Special review of all plans relating to Port Dover and Port Rowan to encourage the progressive development of these communities into recreational resorts, in accordance with guidelines suggested in this Report. (S. 7.4.2)
Establishment of precise performance standards to distinguish among high environmental impact, high growth impact and minor manufacturing industries. (S. 6.3)	Approval of coordinated environmental management as a fundamental principle in planning for Haldimand-Norfolk.	Feasibility studies relating to the use of inorganic waste and cooling water for recreational purposes. (S. 7.4.2)
Maintenance of a three-mile "exclusion zone" between the perimeter of the Nanticoke industrial area and any large-scale residential development; study of implications for the owners of affected lands, with compensatory measures to be taken if justified. (L) (S. 6.3)	Approval of the principle of maintaining permanent green belts in western Norfolk and along the Grand River.	Reconstruction of historic features. (S. 7.5)
No substantial extension of industrial use on the Lake Erie shoreline. (S. 6.3)	Approval of carefully planned use of the entire Lake Erie shoreline in Haldimand-Norfolk.	Special measures to preserve buildings of historic and/or architectural significance. (L) (S. 7.5.1)
Public acquisition of all lakeshore lands in the Nanticoke industrial area other than those now required for industrial purposes. (S. 6.3)	Approval in principle of the development of a parkway system in Haldimand-Norfolk.	E. Agriculture and Forestry (Report Chapter 7)
Adoption of general "screening" requirements applicable to major manufacturing industries. (L) (S. 6.3)	Programmes and Actions Required	Government Decision Required for Policy Direction
Review by the Department of Municipal Affairs of local official plans and development controls to ensure consistency with the recommended policies. (S. 6.3)	Study of the use and misuse of agricultural, forest and natural areas to produce recommendations for improved management. (S. 7.1.2)	Approval of the maintenance of a sound agricultural and forest economy in both Haldimand and Norfolk as a basic element of long-term planning policy.
Minor manufacturing industries to be encouraged in or near urban communities, subject to appropriate location and performance standards. (S. 6.4)	Review of the present conditions (including official plans, zoning by-laws, etc.) affecting all special natural, recreational and historical resources identified in this Report, and where necessary, interim measures to ensure their preservation. (L) (S. 7.4.2)	Programmes and Actions Required
Manufacturing industries generally to be discouraged in rural areas. (S. 6.4)	Preparation and initiation of a long-term programme of public acquisition of key natural, recreational and historical resources, including the Lake Erie beaches. (S. 7.4.2)	As a general guideline only, preference for low-productivity farmland for conversion to non-agricultural use (including recreation). (S. 7.2)
Study of the operation of existing extractive industries to prepare for future planning recommendations. (S. 6.5)	Comprehensive planning of acquisition and development of land for recreational purposes, related to urban growth. (S. 7.4.2)	Maintenance of firm controls over the conversion of farmland to other uses except in accordance with plans approved by the Government. (S. 7.2.1)
Application of regulations under The Pits and Quarries Act to Haldimand-Norfolk. (S. 6.5)	Planning and progressive development of a parkway system. (S. 7.4.2)	Establishment of special programmes (including, if necessary, financial assistance) to put agriculture in Haldimand on a firm economic footing. (L) (S. 7.2.1)
D. Open Space, Conservation, Recreational and Historical Resources (Report Chapter 7)	Preparation of a comprehensive plan for the future use of the Lake Erie shore, including recreation, industrial use, cottage relocation and development, parkway planning and appropriate services and facilities. (S. 7.4.2)	Initiation of comprehensive planning for forestry development and forest management, especially in Norfolk. (S. 7.3.1)
Government Decision Required for Policy Direction		Measures to strengthen local control over protection of forest lands and promotion of reforestation. (L) (S. 7.3.2)
Statement of intention to maintain the existing agricultural and open character of all lands in Haldimand-Norfolk except		Study of the need for greater Provincial

financial support for reforestation, forest protection and forest management. (S. 7.3.2)

F. Transportation (Report Chapter 8)

Government Decision Required for Policy Direction

Approval of the principle that transportation planning should promote broader land use planning and development objectives.

Programmes and Actions Required

Preparation of a comprehensive (all-mode) transportation plan for central southwestern Ontario. (S. 8.4)

Construction, when necessary, of a new freeway (or successor mode) approximately following the route of Highway 3, but taking account of the objectives and principles presented in this Report. (S. 8.5.1)

Construction of a new limited-access road from the Woodhouse New Town-Nanticoke area towards Hamilton approximately along the route of the new Ontario Hydro transmission lines. (S. 8.5.1)

Construction of an initial basic road system for the Woodhouse New Town-Nanticoke area as recommended in this Report. (S. 8.5.1)

Approach to the Federal Government to secure the construction of new railway lines in locations consistent with the objectives and principles presented in this Report, with particular reference to the proposed CPR line to serve Stelco. (S. 8.5.2)

Consideration of possible future interurban rapid transit in planning transportation connections northeast from the Woodhouse New Town-Nanticoke area. (S. 8.5.2)

Location of regional airport, if required, southwest of Hagersville. (S. 8.6)

Building of airfields in the western and eastern sectors of the Study Area. (S. 8.6)

Study of future water transport and port requirements by the Federal Department of Transport. (S. 8.7)

G. Linear Services and Service Corridors (Report Chapter 8)

Government Decision Required for Policy Direction

Approval of mandatory guidelines for the planning and construction of linear services.

Approval in principle for mandatory authority respecting the location of linear services to be given to a new or existing Provincial agency.

Programmes and Actions Required

Locating new high-voltage transmission lines from the Nanticoke Generating Station to the London area in the vicinity of the Penn Central railway line. (S. 8.5.3)

Locating new transmission lines from the Nanticoke Generating Station to Simcoe preferably north of Highway 3, otherwise immediately north of Port Dover. (S. 8.5.3)

Keeping new transmission lines eastward from the Nanticoke Generating Station well back from the Lake Erie shoreline and observing both the character of the Grand River valley and the possibility of future urban development east of Nanticoke. (S. 8.5.3)

Detailed planning of the "Hagersville service corridor". (S. 8.5.5)

Detailed planning of a service corridor north of Port Dover if required. (S. 8.5.5)

Detailed study of crossings of green belts by linear services. (S. 8.5.5)

Establishment of regulatory authority to coordinate the location of linear services. (L) (S. 8.5.5)

H. Implementation (Report Chapter 9)

Government Decision Required for Policy Direction

Approval of this Report for guidance of all Provincial programmes and activities in Haldimand-Norfolk.

Approval in principle of special financial measures where required.

Programmes and Actions Required

Convening of a conference among appropriate Provincial and Federal (and possibly municipal) officials to ensure full exchange of information about the plan, its objectives and implications. (S. 9.2)

Establishment of a Crown Corporation for the development of Woodhouse New Town. (L) (S. 9.3)

Clear definition of the respective areas of responsibility of the Woodhouse New Town development corporation and of the regional planning agency, with provision for Ministerial resolution of conflicts. (L) (S. 9.3)

Establishment of an interdepartmental environmental management committee. (S. 9.3)

Interim provision for continuation of the Haldimand-Norfolk planning programme, preferably through establishment of a temporary Provincial Haldimand-Norfolk Planning Service. (S. 9.4)

Provision for coordination of Provincial programmes in the field, coupled with continuous monitoring of the development process and with the maintenance of effective communication between the Provincial and local levels. (S. 9.3)

Establishment of a Provincial community development office. (S. 9.4)

Studies of the social implications of urban-industrial developments in the area. (S. 9.4)

Establishment of a housing information service, preferably as an arm of the Haldimand-Norfolk Planning Service or of the community development office. (S. 9.4)

Preparation of a capital needs forecast. (S. 9.5)

Provision of funds for:

- a) townsite acquisition;
- b) acquisition of open space, key natural features, historic buildings, etc.;
- c) special assistance to municipalities;
- d) special assistance for agricultural development if required (L).

(S. 9.5)

2.1 The Haldimand-Norfolk Study

The Counties of Haldimand and Norfolk together cover some 1,100 square miles on the north shore of Lake Erie, south and southwest of Hamilton. They are mainly rural in character. Of a total population of some 83,000, 34,000 live in incorporated towns and villages, of which the largest, Simcoe, has about 11,000 people.

In 1968 the Steel Company of Canada (Stelco) announced the acquisition of 6,600 acres on the lakeshore, straddling the boundary between the two counties near the hamlet of Nanticoke, as the site for a completely new steel-making operation and an industrial park. Only a mile away, construction was soon to start on a new thermal generating station for the Hydro-Electric Power Commission of Ontario. Within the next couple of years, the Dominion Foundries and Steel Company (Dofasco) announced that it was acquiring a site for future expansion on the lakeshore, 40 miles west of Stelco's site; and Texaco of Canada made known its plans to build a new oil refinery next to Ontario Hydro's site at Nanticoke.

It was clear to the Ontario Government that Stelco would have an enormous impact on population growth, urban development and economic and social change. It was clear also that the 28 relatively small local municipalities of the two counties were in no position, without substantial help, to plan and provide for this impact. Therefore, on March 17, 1969, the Minister of Municipal Affairs announced the formation of a special "task force" to prepare an outline development plan, primarily as a guide to Provincial policies and programmes in the area. (The Director of the Haldimand-Norfolk Study (HNS) was also asked to make recommendations on the restructuring of municipal government, within the framework of the Provincial policy of municipal government reorganization announced in the White Paper *Design for Development, Phase Two*, (1968); this will be the subject of a later report.)

Regional planning by the Provincial Government was in fact already in progress, under *Design for Development*

(Phase One, 1966).¹ The need for a special project group for Haldimand-Norfolk arose from three factors. First, the Regional Development Programme was still in the study and analysis stage, while Stelco's decision appeared at the time to demand quick action and interim measures to keep the situation under control pending the completion of regional plans. Second, it was clear that in this case development planning and local government reform would have to be particularly closely integrated. Third, it happened that Stelco's site straddled the boundary not only between two counties, but also between two development regions, Niagara and Erie. The preparation of the Haldimand-Norfolk plan has been closely coordinated with the work of the Regional Development Branch.

The Study has in fact been heavily dependent on the cooperation of other Provincial departments and agencies. In addition to the Regional Development Branch, the Study staff has worked particularly closely with the Community Planning Branch of the Department of Municipal Affairs on local official plans, zoning and the subdivision of land; with the Department of Highways on the planning of roads and highways; and with the Ontario Water Resources Commission (OWRC) on water supply and sewerage. Of special value also have been contacts with the Air Management Branch of the Department of Energy and Resources Management and the Conservation Authorities Branch of the Department of Lands and Forests on outdoor recreation areas, conservation and related matters; with Ontario Hydro on the location of transmission lines; and with the Ontario Housing Corporation.

¹The Regional Development Programme, carried out by the Regional Development Branch of the Department of Treasury and Economics.

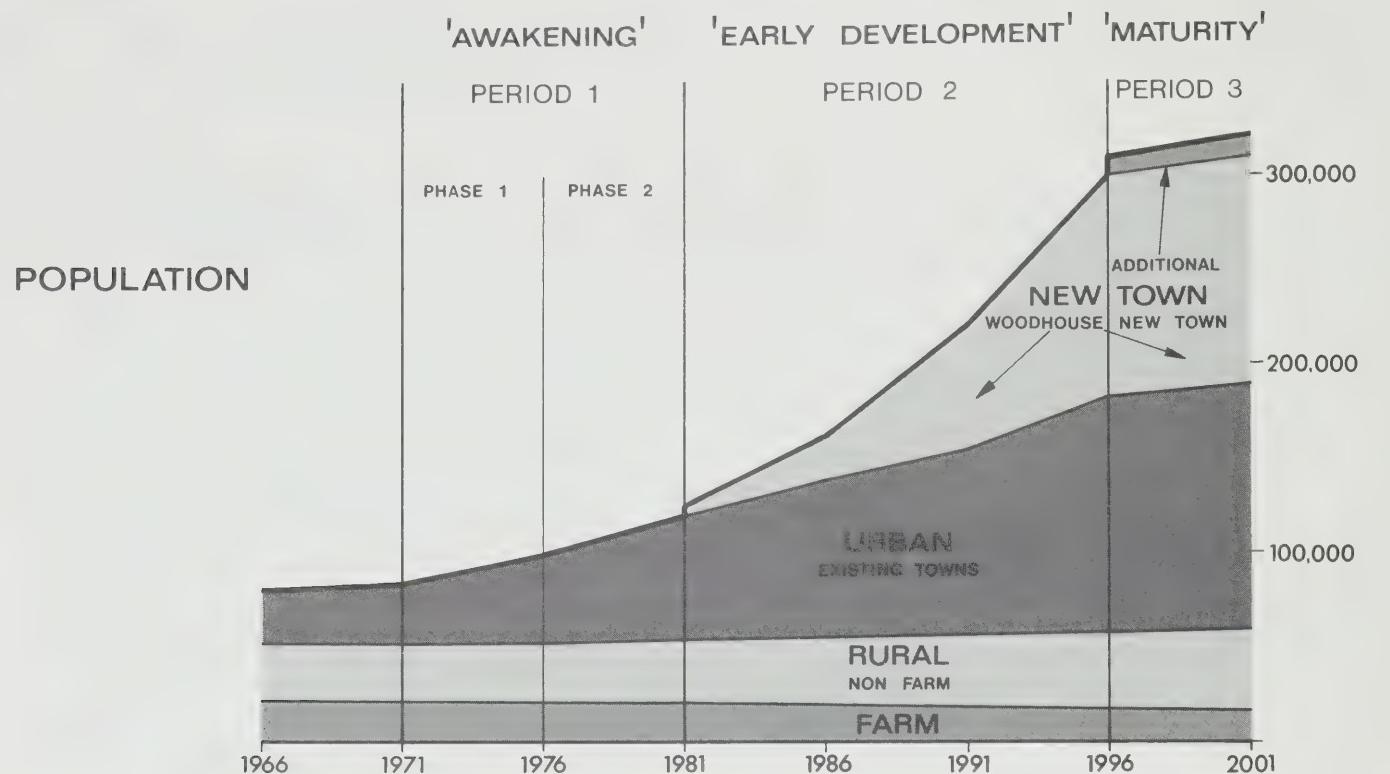
2.2 The Joint Study Committee

Shortly after the establishment of the HNS, the two county councils, after consultation with the Minister of Municipal Affairs, decided to establish a joint committee for purposes of liaison between the Study and the municipal councils; to serve as the vehicle for making local views known to the Study Director; and generally to examine matters of common interest relating to planning, development and local government. The Haldimand-Norfolk Joint Study Committee (also referred to in this Report as the JSC) comprised in 1970 the two Wardens, the two county clerks, the reeves of most local municipalities, and two members at large from Norfolk to give that county equal representation. The members from each county elected a Co-Chairman and a Vice-Chairman. The Committee formed an executive committee and six subcommittees, each dealing with a specific aspect of planning. Each subcommittee met monthly for about a year, and each produced a set of recommendations. These recommendations were then laid before a series of seven public meetings at the end of 1970. After review and adoption by the full Committee, they were approved by the two county councils and submitted to the Provincial Government.

Not all the recommendations of the JSC are incorporated in this Report, as many of them relate to matters outside the scope of a report dealing in general with broad planning concepts and strategies. They will come into their own, however, in the local government review phase of the Study or at a later stage of the planning process. But there appear to be no basic differences of principle or policy between this Report and that of the JSC; the two are indeed in large measure complementary.

The role of the Joint Study Committee has been a notable one in several ways. It has provided a remarkable example of close and friendly cooperation between neighbouring counties. The Committee members have shown an extremely high level of responsibility, conscientiousness and far-sightedness in their determination to consider the future of the area as a whole, and in seeking out information and guidance. Close liaison was

CHANGE & RESPONSE – URBAN DEVELOPMENT



ACTIONS &
DECISIONS
NEEDED – URBAN
DEVELOPMENT

MAJOR
PROBLEMS

REASSESSMENT OF NEEDS		
ACQUISITION OR OTHER PROTECTIVE MEASURES FOR WOODHOUSE TOWNSITE	LATEST DATE FOR DECISION ON LONG-RANGE URBAN GROWTH STRATEGY	CONSTRUCTION OF LIMITED ACCESS ROAD FOR HAMILTON - NANTICOKE - WOODHOUSE NEW TOWN
ENSURE CONSISTENCY OF LOCAL LAND USE CONTROLS WITH WOODHOUSE PROPOSAL COMPLETION OF WOODHOUSE NEW TOWN PLANS	COMPLETION OF BASIC ROAD SYSTEM FOR WOODHOUSE - NANTICOKE AREA	CONSTRUCTION OF A NEW EAST - WEST SANITARY SYSTEM FREEWAY (?)
PRE-INDUSTRIAL SETTING	EXTENSIVE SWIFT URBANIZATION NEW URBAN INFRASTRUCTURE DISPROPORTIONATE NEED FOR SOCIAL CAPITAL (HOUSING, INSTITUTIONS, ROADS, ETC.)	SOUND TAXATION BASE ACHIEVED
LAND ASSEMBLY		
DIMINISHING TAX BASE		
RISING COSTS OF LAND AND HOUSING		

FIGURE NO-1
HALDIMAND - NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY,1971

THE STUDY AREA IN CONTEXT

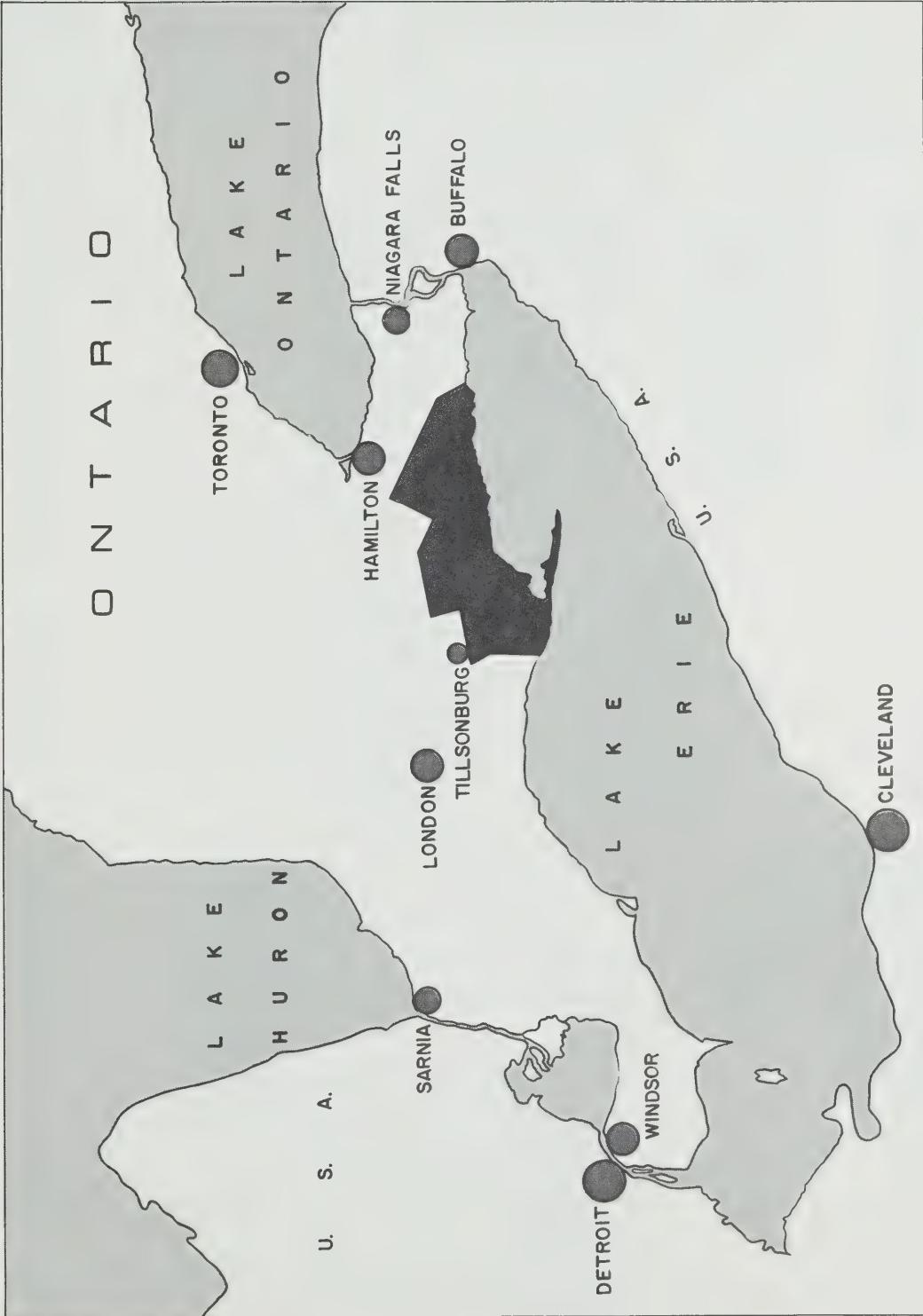
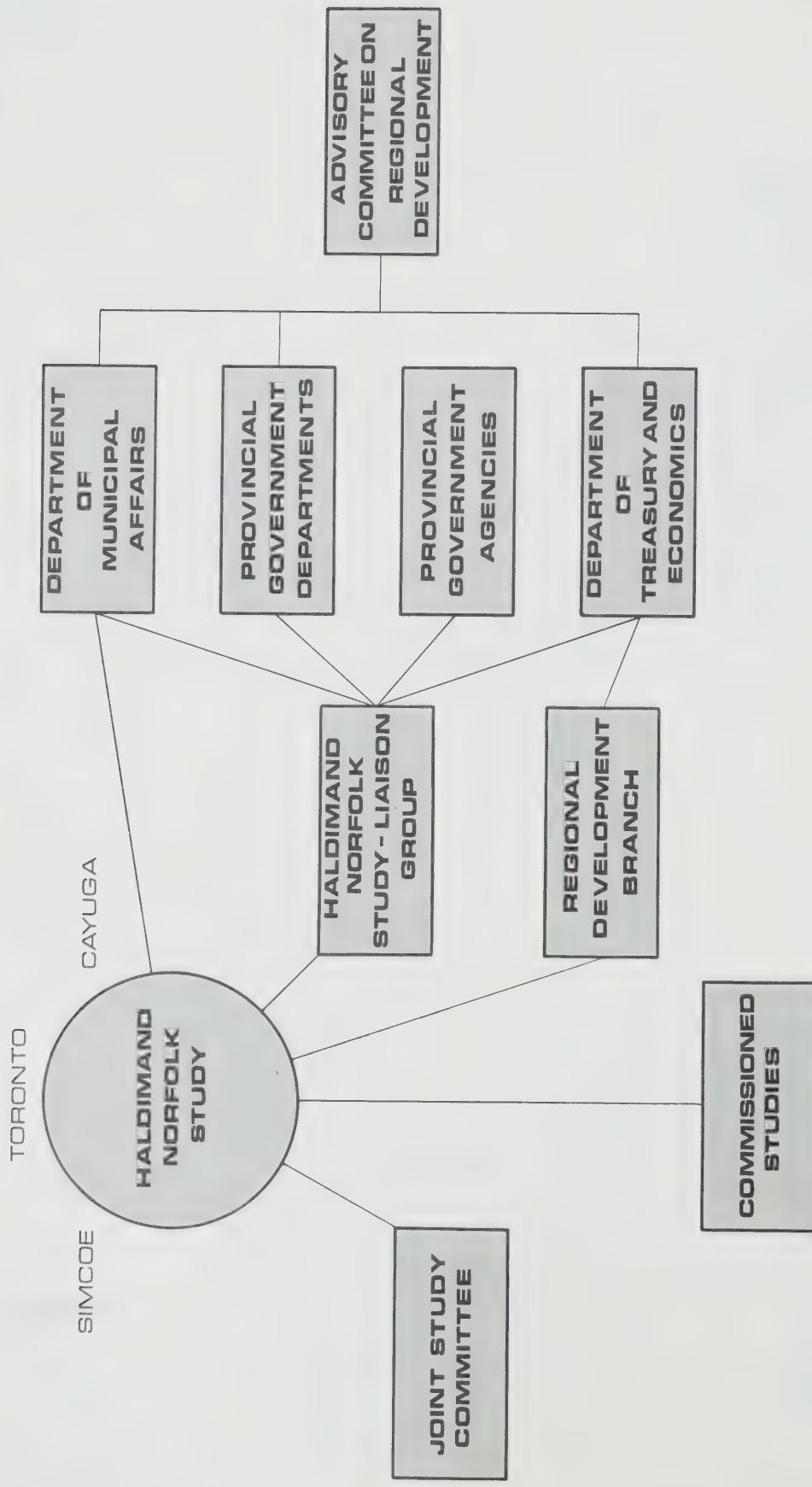


FIGURE NO-2
HALDIMAND - NORFOLK STUDY

DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

HALDIMAND NORFOLK STUDY ORGANIZATION – PHASE 1



2.3 Special Studies

maintained between the HNS and the JSC throughout the planning phase of the Study, and much information was exchanged. On the part of the HNS, this was the special responsibility of the Assistant Study Director, who maintained offices in both county administration buildings.

In addition to the valuable assistance of government departments and agencies, two consultant reports played an important part in the planning phase of the Study. It became evident at the very beginning that it was essential to examine the possible effects of the natural environment on urban and industrial growth, and vice versa. Consequently, Professor Victor Chanasyk, the Director of the School of Landscape Architecture at the University of Guelph, was commissioned to direct and coordinate this project. The "Environmental Appraisal", carried out by Professor Chanasyk and nine other specialists, examined the history of the area; geology and geomorphology; meteorology and air pollution; climatology; historical ecology; water resources and water quality; suitability of soils for urban and industrial use; and landscape quality.

Although the Appraisal has to varying degrees influenced all of this Report (particularly Chapter 7), the Chanasyk report contains many additional recommendations not included here. Therefore, it should be studied and used in its own right, as the basis of a coordinated environmental management programme for the Study Area and its vicinity.

An "Evaluation of Urban Systems" was carried out by Canadian Bechtel Ltd. In this study, the consultants prepared their own projections of economic and population growth, and examined a total of 11 possible locations for large-scale urban development to accommodate the expected demand. Each location was evaluated against a number of criteria, grouped into environmental factors, accessibility, community facilities and services, development cost, and potential for initial rapid growth. While its conclusions were not taken as definitive, the Bechtel report provided a valuable check on, and supplement to, the preliminary conclusions reached by the Study itself. Its results are reflected in Chapters 3 and 4.

Dr. J. N. Jackson, then Chairman of the Geography Department at Brock University, St. Catharines, prepared a paper which provided a most useful overview

of long-term economic growth in southwestern Ontario as background for the Study.

An "Appraisal of Social Problems and Needs" was prepared by the Planning and Resources Institute of the University of Waterloo. This appraisal is preliminary only, in the sense that it is a general review to serve as the basis for more detailed future investigation. (Section 9.4)

2.4 Major Development Influences

Topographic Features

Like that of most of southern Ontario, the landscape of Haldimand and Norfolk is mostly flat or gently rolling, generally pleasant but undramatic. The Study Area (Figure 4) is defined fairly closely by three natural boundaries: the lakeshore, the lower Grand River, and the valleys of the Big and Otter Creeks. The lakeshore, at the base of this natural triangle, varies a good deal in character. West of Peacock Point, bluffs alternate with beaches, the latter formed by the erosion of the former (parts of the shoreline are being eaten away by as much as 18 feet per year). East of the Point, the shoreline is generally lower, with beaches and rock outcrops alternating. The eastern side of the triangle is formed by the beautiful valley of the lower Grand, falling and widening as the river flows through Caledonia to the lake. On the west side, the smaller Big Creek and Otter Creek cut sharper valleys on either side of the western Norfolk county line.

The most striking natural feature of the Study Area is Long Point, a 20-mile-long sandspit most of which has so far fortunately been preserved in its natural state to form a unique haven for animal and plant life. On the other side of the Inner Bay, the Turkey Point marshes provide another important wildlife habitat.

Soils

The soils of Haldimand and Norfolk are dominated by two types, the boundary between them corresponding closely to the county line. The Haldimand clay is potentially productive but presents drainage problems; the Norfolk sand plain is classed as "poor" soil. Paradoxically, the latter is ideally suited for a particular crop, tobacco, which has made that county one of Canada's most prosperous agricultural areas, while the returns from Haldimand's soils are relatively poor by southern Ontario standards.

Climate

The climate is moderate due to the tempering effect of the lake. While there are no sharp differences within the Study Area, winters are generally milder and summers cooler near the lakeshore, with

the greatest extremes around Delhi. The highest snowfall occurs along a belt roughly following Highway 3; rainfall is highest near the lake and diminishes northward to the Caledonia area. The prevailing winds are from the west and southwest. Low-temperature areas around Delhi and along the Grand Valley below Cayuga create local inversion conditions.

Urban Influences

The largest towns in the Study Area are Simcoe (pop. 11,000) and Dunnville (pop. 5,500). The other eight towns and villages all have under 5,000 people each, although Tillsonburg, in Oxford County just outside the Norfolk boundary, has a population of 6,500. Although the Study Area itself is mainly rural, it lies within an arc of large urban centres, from St. Catharines-Niagara Falls-Welland to the east, through Hamilton, Brantford and Kitchener-Waterloo-Galt to the north, to London in the west. Communication patterns suggest that both counties have strong linkages with Toronto, followed by Hamilton for Haldimand and Brantford for Norfolk. Norfolk also looks to London for some services.

Recreation

The Lake Erie beaches are summer playgrounds for the people of Buffalo, Hamilton, London and other nearby urban centres. Thus several communities along the shore function as summer resorts and weekend recreation centres, notably Port Dover and Port Rowan. The former is also a commercial fishing port. In addition, summer cottages form an almost continuous ribbon along the shore from Port Dover eastward. There are also large cottage clusters at Long Point and Turkey Point Provincial Parks and smaller ones at Port Ryerse, Normandale and other communities.

Indian Reserves

Partly within the boundaries of Haldimand, though mainly in Brant County, are the Six Nations Indian Reserve and the adjacent, smaller New Credit Reserve. Together they occupy some 70 square miles situated between Hamilton, Brantford and the Nanticoke industrial area. Despite their strategic location and

lack of physical obstacles to development, any consideration of possible changes in the use of Reserve land will probably have to await the establishment of goals and policies by the Indians themselves.

Transportation

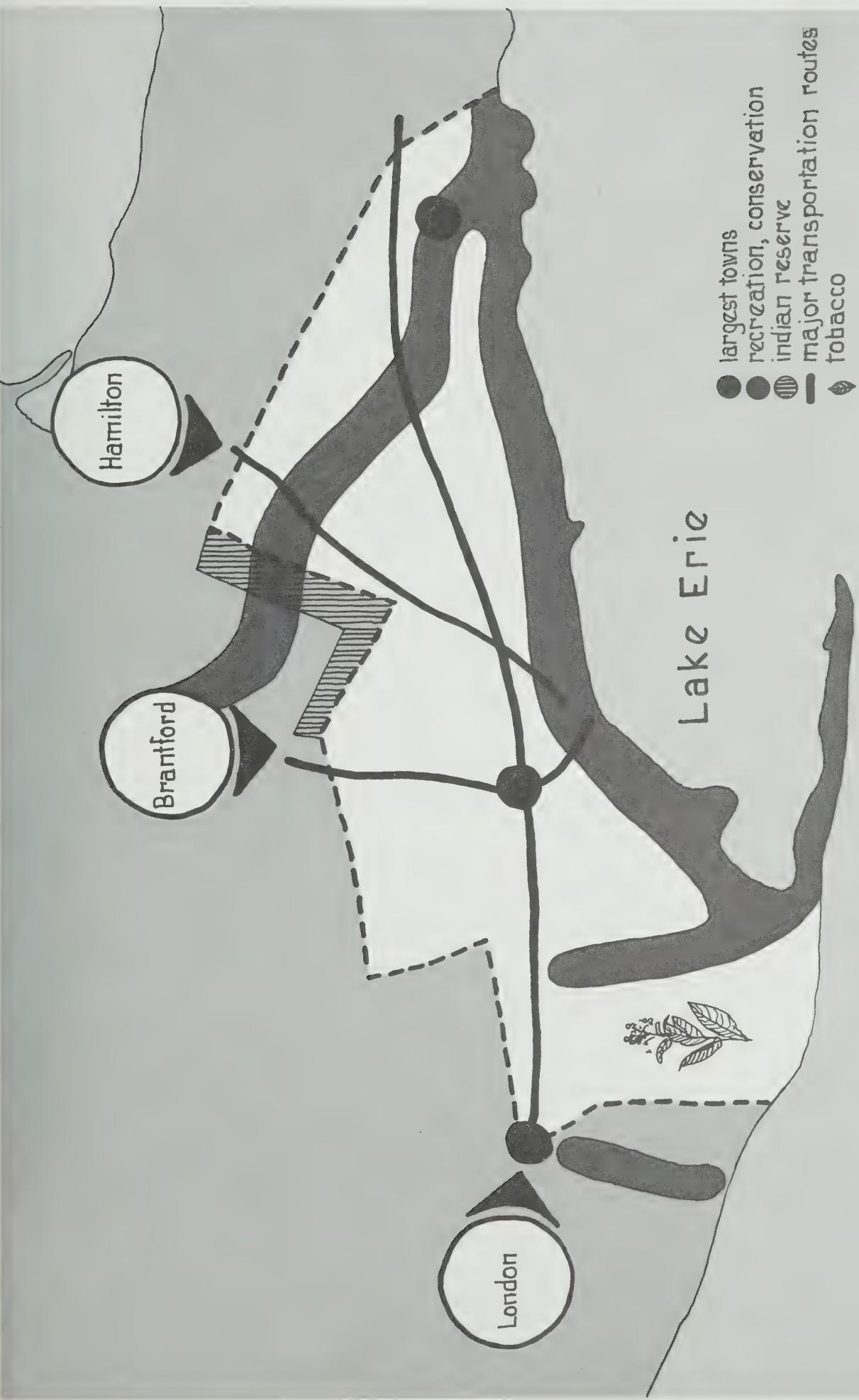
The basic pattern of main roads and that of the railways are similar. A "V" converges on the Simcoe-Port Dover-Nanticoke area from Hamilton to the northeast (Highway 6 and the CNR) and from Brantford to the north (Highway 24, and the Lake Erie and Northern, and Toronto, Hamilton and Buffalo railway lines). The V is crossed east-west by Highway 3, the CNR and the Penn Central Railroad. There is no major airport within the Study Area (the nearest is at Mount Hope, between Caledonia and Hamilton), but there are several licensed and unlicensed airfields and four former RCAF airfields, none of the latter now used for aviation. There is no lake port either (except for fishing boats), although the Great Lakes shipping lanes pass close to Long Point.

The present east-west land transportation routes, which to a great extent carry traffic having both its origin and its destination in the United States, reflect what may well eventually be a very important influence on the development of Haldimand-Norfolk. Southwestern Ontario forms a "land bridge" between the great U.S. midwest cities and those of the eastern seaboard, making Haldimand-Norfolk part of a great potential international development corridor. The Study Area is in fact located just where that embryonic corridor meets the existing Grand Trunk Corridor which extends along the north shore of Lake Ontario and the St. Lawrence River. Thus, if predictions of a vast mesh of interlocked urban areas extending around the southern Great Lakes and eastward to the Atlantic are fulfilled, Haldimand-Norfolk will lie at its very centre. Although as yet more speculation than prediction, this possibility does provide an important perspective in which to view the more immediate future. *

MAJOR DEVELOPMENT INFLUENCES

FIGURE NO.4
HALDIMAND - NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

largest towns
recreation, conservation
indian reserve
major transportation routes
tobacco



2.5 Regional Policies, Economic Development and the Plan

The relationship between the HNS and industrial development in the Nanticoke area has already been indicated. If this development were not in prospect, Haldimand and Norfolk, though not entirely unaffected by economic and population growth around them, would probably remain for the foreseeable future an area of farms, small towns, and rather slow growth by southern Ontario standards. It is the advent of large-scale industry, Stelco in particular, which, because of the very large numbers of workers involved, is likely to bring about rapid change and therefore gives rise to the need for special planning measures. Some general observations about the policy and planning implications of this prospective industrial growth are therefore in order.

First, unless steps are taken to counteract current economic forces, it is reasonable to assume that the trend towards large-scale industrial growth in central southwestern Ontario, on or near Lake Erie, will continue. The choice of sites at Talbotville by Ford and at Port Burwell by Dofasco, in addition to the moves of Stelco, Texaco and Ontario Hydro, demonstrate the attractiveness of this part of the province to large industries. The choice of Nanticoke specifically was made for somewhat different reasons by Stelco, Texaco and Hydro, but these reasons reveal a combination of location factors (for example, accessibility by lake shipping, good land transportation, site availability, proximity to Canada's largest urban concentration and to U.S. markets) which can reasonably be expected to attract other large industries sooner or later, given continuing economic growth in the country as a whole.

Second, this state of affairs has important implications both for the province and for the country. At the Provincial level it is the Government's policy to encourage "the smoothing out of conspicuous regional economic inequalities".² A policy of stimulating economic growth in the underdeveloped regions of Canada has similarly been adopted by the Federal Government and is being

pursued by the Department of Regional Economic Expansion. Yet in the heart of the most heavily populated and wealthiest part of Canada, Stelco has chosen to build a new plant which by the end of the century may produce as much steel as all of Canada does today, thereby adding significantly to the already substantial economic base of southwestern Ontario. Moreover, Texaco will build a refinery in the same area which will provide over a quarter of the company's total present Canadian capacity. Hence, there appears to be a discrepancy between economic trends on the one hand and Government policies, both Federal and Provincial, on the other.

Third, and conversely, the future of the Study Area may well depend on the effectiveness or otherwise of the regional development plans and programmes now being prepared for other parts of the province. The "relative opportunities" provided by a full set of regional plans will guide investment decisions in Ontario; if investment opportunities are better elsewhere, growth will not occur in Haldimand-Norfolk no matter how attractive it is.

Fourth, on the basis of what is presently known, the future of Haldimand-Norfolk depends very largely on Stelco alone, since its permanent labour force will far exceed those of Texaco and Hydro together. While Stelco's dominance may in time be modified, *the timing and pace of large-scale urban growth in the Study Area at present appears to depend almost entirely on the timing and pace of Stelco's development. The present plan is based on the information currently (early 1971) available from Stelco as to its own intentions and expectations.* However, the state of the national economy, foreign competition, the availability of labour and of investment capital, and the alternatives open to the company, will all effect the speed with which Stelco's Lake Erie Works proceed. Any major change in Stelco's programme would require that this plan be thoroughly reviewed and the urban development strategy perhaps substantially revised. *This Report and all its recommendations are therefore neces-*

sarily subject to this basic qualification.

The forecasts on which this plan is based assume that substantial urban growth in the Haldimand-Norfolk area will be consistent with future regional development policies. It should be stressed that these projections actually assume that only about 25 per cent of the industrial growth generated by Stelco will take place within Haldimand-Norfolk, with the rest located elsewhere, mostly in southwestern Ontario. Nevertheless, if rapid urbanization in Haldimand-Norfolk turns out to be inconsistent with future Provincial policies, the desirability of Stelco's Lake Erie Works would be called into question. On the other hand, Stelco may in the future change its investment decisions to follow the location of new urban markets emerging as a result of such policies.

²Design for Development (Phase One), p. 6.

2.6 Nature, Purpose and Organization of the Plan

The main purpose of this plan, if it is approved by the Government, is to serve as an official policy framework to guide and coordinate the individual plans and programmes of Provincial departments and agencies in Haldimand-Norfolk – the administration of local official plans, zoning and subdivision control; the planning of highways and regional water supply and sewerage systems; and so on.

The plan is not a “regional” plan in the same sense as those being prepared by the Regional Development Branch; it is however, complementary to the emerging Design for Development plans for the Niagara (South Ontario) and Erie Regions. It is not intended as an “official plan” under the terms of *The Planning Act*, since it relates primarily to Provincial responsibilities and there is in any case no appropriate planning area defined under the Act. But it could serve as the basis for an official plan for a new planning area or areas following municipal reorganization.

Most of the recommendations of this Report are grouped into “long-range” and “initial” objectives and policies. Greater precision is on the whole not possible because of the lack of a firm development timetable. “Long-range” objectives are to be regarded as setting a course for policy and a framework for decision-making; in general they would not be fully achieved in less than 20 to 30 years. “Initial” objectives are those which should be achieved either as soon as possible to avert occurrences which might frustrate long-range objectives, or at an early stage in the over-all development process as the first steps towards the long-range objectives.

The main concern of this Report is with establishing a foundation of basic development policies. In the phrase applied by former Prime Minister Robarts to the Design for Development for the Toronto-Centred Region, these are “the first broad brushstrokes”. The details remain to be filled in and many important questions are not yet answered. Many recommendations relate to the carrying out of further studies and the preparation of more detailed plans. This Report should be considered only as the beginning of a continuing planning process.

3.1 Urbanization and Industrial Development

In the last few decades, urban growth in Haldimand and Norfolk has been slower than in many other rural parts of Ontario. However, the proportion of the population living in towns of over 1,000 people has grown from 32.7 per cent in 1951 to 37.7 per cent in 1966. Correspondingly, the rural proportion of the population has declined from 67.3 per cent to 62.3 per cent in the same period.

Future changes in the area will be much more dramatic than those of the past. Even without the industrial development now expected, external influences would have had a substantial effect on the economy, life-style and environment of the two counties before the end of the century. These changes would not, however, have affected the social and economic structure of the area to the extent that must now be expected. The new employment opportunities directly and indirectly created by Stelco will bring about a population increase explosive in impact relative to the present population of the Study Area. By the end of this century Haldimand-Norfolk could easily have a population of well over 300,000, over 80 per cent of it urban (Table 6).

Population growth will be extremely rapid, an average of about five per cent (cumulative) annually, and much higher in some periods. This growth will be coupled with a radical change in the urban-rural distribution of the population, and will be brought about by the advent of Stelco both directly and indirectly. Stelco's own employment would in itself be sufficient to populate a city of 60,000 to 70,000 people by the end of the century; but in addition, Stelco will almost certainly attract associated and service industries (multiplier effect) which will in turn attract many more people to the area.

Stelco's decision to build a new steel plant at Nanticoke has focused attention on this location and given it an increased potential for future industrial and urban development. Apart from this psychological factor, conditions are in fact generally favourable for further industrial growth: proximity to major market areas; the availability of alternative transportation routes and modes; the economies

of scale arising from the size of the impending developments; and in time the services that will become available, both for industry and for people; and the large labour pool that will be created. On the other hand, new industries will have to take account of the comparatively high wage levels in the steel industry. Comparative cost advantages will determine which other industries choose this location. It seems likely to attract industries whose labour costs are not a dominant consideration in relation to the total cost of production, but for which transportation is a major cost factor.

At present the new and prospective industries are at different stages of commitment (Appendix B). Ontario Hydro's Nanticoke Generating Station is already under construction and its first generator went into operation in 1971. Output will be increased annually until the plant reaches its full capacity of four million kw from eight coal-fired generators in 1978. This capacity is roughly double Canada's share of the power production of Niagara Falls.

Texaco of Canada Limited intends to start production of 50,000 barrels a day in 1973 or soon after. Construction of the refinery will take about two years. Texaco owns enough land in Walpole Township to expand its output in the future.

At the present time, Stelco's plans for the starting dates and phasing of both the steel mill and the proposed industrial park are uncertain. The ultimate capacity of the steel mill is to be 12 million ingot tons per year, to be reached about 15 to 20 years after the start of production. There are absolutely no guidelines available now for the industrial park except the limits of the ultimate scale of employment which can be

assumed from the amount of land available. This would probably amount to a maximum employment of about 30,000 at full development. It is not, however, expected that the industrial park will be fully developed during the period with which this plan is concerned (*i.e.*, before the end of this century). In the absence of firm dates for the Stelco development, it is assumed that steel production at the Lake Erie Works will start in 1976. If this assumption proves to be seriously in error, or if unexpected new large-scale industrial development should take place, a review of the plans presented in this Report would be required.

Another major steel company, Dominion Foundries and Steel, may also build a new works on the north shore of Lake Erie. So far as is known, however, Dofasco does not yet have any firm plans and its prospective development near Port Burwell is believed to lie at least 15 years away. Like Stelco, Dofasco intends to make the fullest possible use of its site in Hamilton before starting major operations elsewhere, but unlike Stelco, Dofasco appears to consider that the Hamilton site will probably meet its needs at least until 1985.

In summary, at the time of writing, Hydro is building and its plans are firm; Texaco's plans are also fairly firm, though exact dates are not yet known; Stelco's plans are somewhat uncertain; Dofasco's plans are uncertain, but in any case very long range. Dofasco's plans will be largely ignored in this Report on the assumption that they will not be effective within the next 15 years.

Table 1/Urbanization in Haldimand-Norfolk/Population

	Total		Urban ¹		Rural	
	Population	%	Population	%	Population	%
1951	66,846	100.0	21,876	32.7	44,970	67.3
1956	72,189	100.0	24,596	34.1	47,593	65.9
1961	78,672	100.0	26,920	34.2	51,752	65.8
1966	80,598	100.0	30,358	37.7	50,240	62.3

¹Cities, towns and villages of 1,000 population and over. Source: Dominion Bureau of Statistics, *Census of Canada*.

3.2 Employment and Population Projections

Two sets of population projections were produced prior to this Report (Appendix A). The HNS 1970 projections have now been revised, taking into account both the Bechtel projections and more recent information provided by Stelco. The forecasting technique employed by Bechtel is identical with that of *Towards a Land Use Plan for Haldimand Norfolk* (HNS, 1970).

Population projections in both HNS reports are based on assumptions about the future industrial structure of the Study Area, expressed in terms of employment opportunities and tempered by the relationship of employment to population.

3.2.1 Revised Projections

The future population of the area will consist of two components: the "established" population which would be there in any case, and the "induced" population attracted by industrial employment. These components have been projected separately, although they are obviously highly interrelated. (Figure 5.)

The Study Area's population has shown moderate growth in recent decades, from 66,846 in 1951 to 80,598 in 1966, an average of slightly over one per cent yearly. Based on demographic and migration trends alone, the Economic Analysis Branch of the Department of Treasury and Economics has prepared population projections for each county in the province for the period 1971-2001 (Table 2). On the basis of these pro-

jected alternatives, the populations of the two counties would reach 88,000-100,000 by 1981, and 86,000-135,000 by 2001. These ranges correspond quite well with the revised HNS projection of the growth of the "established" population figures as now projected, taking into account Stelco's present development plans as far as they are known. Since the most recent information available from Stelco extends only to the year 1980, the first ten years (1971 to 1980) can be treated with more confidence for the purpose of the revised population projections than the following 20 years (1981-2000). Three alternative projections were prepared for the period 1981 to 2000, related to current projections of the growth of the Canadian steel industry (from five per cent to seven per cent annual increase in output):

Zero per cent alternatives: No Stelco development at Nanticoke; further development of the existing economic base only;

*Five per cent alternative:*¹ Stelco production starting in 1976 with a five per cent annual increase in output;

Seven per cent alternative: Stelco production starting in 1976 with a seven per cent annual increase in output.

¹After completion of this report further support for the five per cent alternative was found in a research paper, "The Canadian Steel Industry", published by Richardson Securities of Canada, February 1972.

The zero per cent alternative would result in a population projection within the ranges projected by the Department of Treasury and Economics. But the five per cent alternative would give much higher figures: a population of 320,000 by 2001, clearly implying a very high level of immigration into the area. In fact the induced population would begin to outnumber the established population by the late 1980's, and would be twice the established population by 2001 (Figure 5). Thus population growth in the Study Area brought about by the Stelco development will result in Haldimand-Norfolk more than doubling, perhaps tripling, its share of the province's population in relation to the projections of the Economic Analysis Branch (Table 2). This in turn would imply a deficit in the population figures projected by the Branch for other parts of the province, if over-all projections for the province were to remain unchanged.

While there is a very wide difference between the population projections for the year 2001 arising from the zero per cent and five per cent alternatives respectively, 116,000 versus 321,000 (Figure 5), the difference between the results of the five per cent and seven per cent assumptions is only 321,000 versus 323,000. For practical purposes this difference is negligible, and the figure of 321,000 will be used for the purposes of this Report. Despite the great medium-term differences in labour force and population that would result from any variation between five per cent and seven per cent annual increase in steel production, the expected ultimate capacity of 12 million ingot tons annually at the Lake Erie Works will in either case be reached by 1996. Similarly, the difference between the five per cent and seven per cent alternatives does not greatly affect the population projections for 1981. Only around the year 1990 does the possible variation between these two alternative projections of annual increase in steel production make a substantial difference to employment and population projections.

The differences in population in the Study Area arising from the zero per cent and five per cent alternatives

Table 2/Population in Haldimand-Norfolk Compared to Ontario

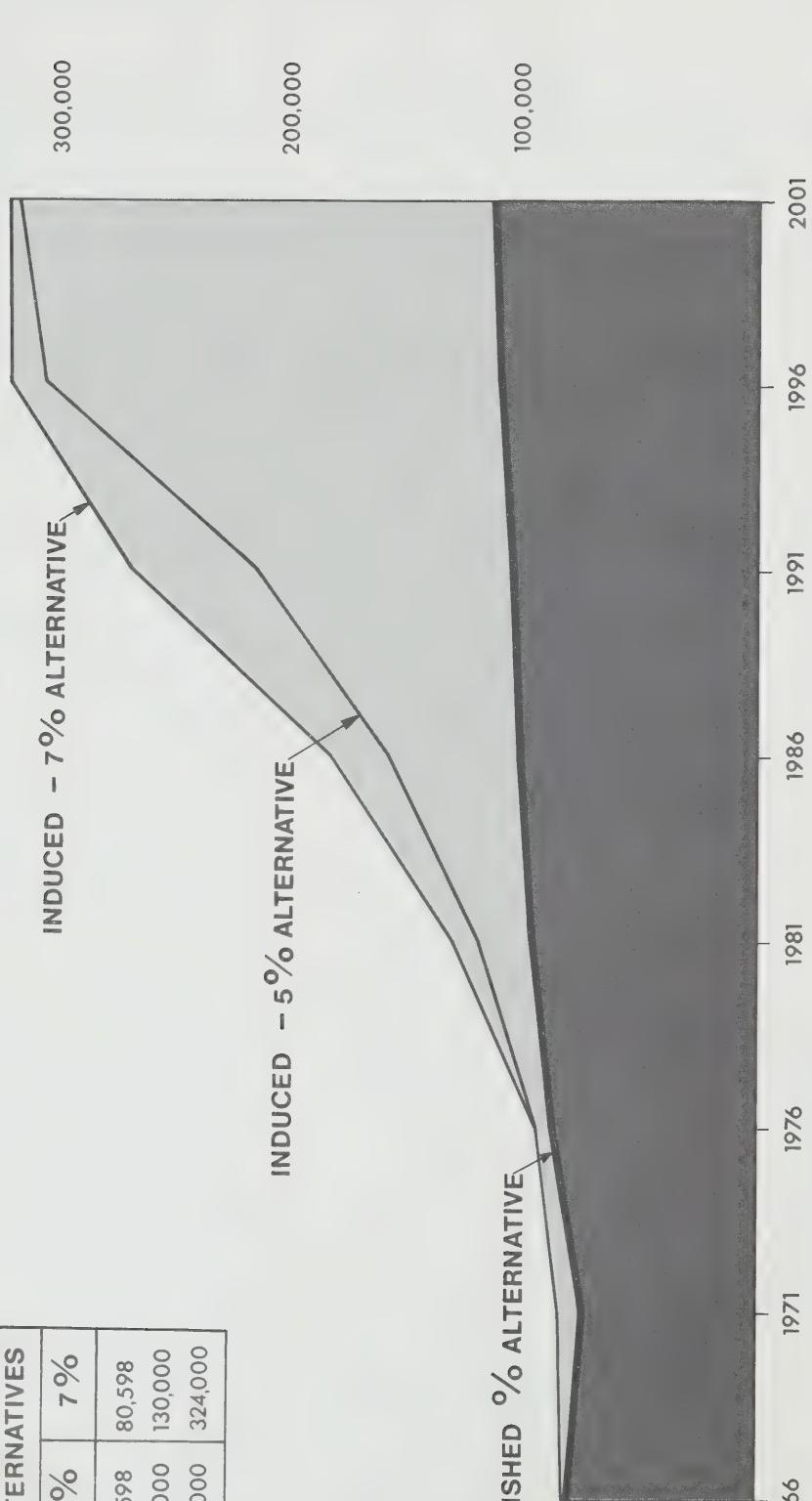
	1966	1981	2001
<i>Ontario</i> ¹			
Highest alternative	6,960,870	9,757,861	14,649,921
Lowest alternative		8,510,437	9,580,689
<i>Haldimand-Norfolk</i>	80,589		
Highest ¹ alternative		100,408	135,452
Lowest ¹ alternative		87,994	86,504
HNS projection ²		125,000	321,000
<i>Haldimand-Norfolk's Share of Ontario</i>			
Highest ¹ alternative	1.16%	1.03%	.92%
HNS projection ² compared to "highest" in Ontario		1.28%	2.19%
Lowest ¹ alternative		1.03%	.90%
HNS projection ² compared to "lowest" in Ontario		1.47%	3.35%

¹Economic Analysis Branch, Economic and Statistical Services Division of the Department of Treasury and Economics, *Population Projections for Counties and Districts, 1966-2001*, March, 1970.

²Haldimand-Norfolk Study.

TABLE 3

POPULATION ALTERNATIVES	% ALTERNATIVES		
	%	5 %	7 %
1966	80,598	80,598	80,598
1981	98,000	126,000	130,000
2001	116,000	321,000	324,000



ALTERNATIVES OF POPULATION GROWTH IN HALDIMAND-NORFOLK 1966-2001.

FIGURE NO-5
HALDIMAND - NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

respectively would mean a difference in population of 28,000 in 1981 and 205,000 by 2001 (Table 3). This difference obviously would have extremely important planning implications. The plan presented in this Report is based on the five per cent alternative, which is regarded as the most probable of the three. Should the assumption of an annual increase of five per cent in steel production at Nanticoke from about 1976 on prove to be seriously wide of the mark, the plan would have to be revised accordingly, perhaps leading to a substantially different concept of urban development.

The revised population projections (Table 4) of 125,000 in 1981 and 321,000 in 2001 fall between the earlier HNS figures and the projections of the Bechtel report, as shown on Figure A/1. Thus, the revised HNS projections are higher than the 1970 projections despite the delay in Stelco's construction start, and the resultant reduction in basic employment in the short term. However, Stelco's cutback will probably relieve some development pressures, such as demand for workers in construction trades, thus

paving the way for other developments. The over-all effect of this potential structural change could be a better industrial balance, with relatively less emphasis on the steel and steel-related industries.

This improvement in the structural balance between basic and non-basic industry is reflected in higher employment in the non-basic sector in the revised HNS forecasts compared with those of 1970. On the basis of the revised projection of non-basic employment, the Study Area ought to achieve a level of urban services by 2001 (4.06 people per non-basic employee) comparable with that of Hamilton (4.06) or Montreal (4.07) today. In practical terms, the people of Haldimand and Norfolk would then be much less dependent than they are today on outside centres such as Hamilton, Brantford or London for such services as specialized shopping, higher education, or specialized medical treatment. The higher local demand for services generated by the induced population increase will bring about a much greater degree of self-sufficiency, and will generate an increase

in non-basic employment from 7,500 in 1966 to 79,000 by the year 2001. However, some 27,500, or about one-third of the increase in non-basic employment, would occur irrespective of Stelco, reflecting the general trend to a higher level of services and service employment and implying a continuation of the process of urbanization.

3.2.2 Population Characteristics

As already observed, the future population of the Study Area will have two basic components: "established" and "induced". Eventually the latter component will grow to the point where it will substantially outnumber the former. To obtain some indication of how this might change the characteristics of the Study Area's population as a whole, the age, education, marital status, and some employment characteristics of the population of Hamilton were examined. To these were added data on people employed in construction and the steel industry elsewhere in Ontario. It was assumed that these two groups of data would substantially reflect the characteristics of the "induced" population. This information was then compared

**Table 4/Labour Force and Population in Haldimand-Norfolk, 1966-2001
(Summary)**

R e f	Units	1966 ¹	1971 ²	1976 ²	1981 ²	1986 ²	1991 ²	1996 ²	2001 ²
1 Basic Employment	000	16.9	18.6	19.4	21.7	27.4	33.5	42.0	42.6
2 Agriculture	000	10.8	10.5	10.2	9.8	9.5	9.3	9.0	8.7
3 Stelco	000	—	—	2.3	4.3	9.0	14.1	20.4	19.5
4 "Established"	000	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
5 "New"	000	—	2.0	0.8	1.5	2.8	4.0	6.5	8.3
6 Non-Basic Employment	000	7.5	8.8	13.8	22.3	33.3	49.1	75.6	79.0
7 "Established"	000	7.5	7.5	11.3	16.5	19.1	22.2	25.7	27.5
8 "New"	000	—	1.3	2.5	5.8	14.2	26.9	49.9	51.5
9 Total Employment	000	24.4	28.1	35.0	44.0	60.0	82.6	117.6	121.6
10 Unemployed	000	1.0	0.8	1.0	1.2	1.8	2.4	3.6	3.7
11 Commuters — Out — Net	000	4.3	2.2	0.5	0.6	-0.8	-1.5	-2.5	-1.5
12 Labour Force	000	29.7	31.2	36.5	45.8	61.0	83.5	118.7	123.8
13 Population	000	80.6	83.5	99.0	125.0	162.0	220.0	309.0	321.0
<i>Indices</i>									
14 Labour Force Multiplier	(13/12)	2.71	2.68	2.71	2.73	2.74	2.63	2.60	2.60
15 Total Employment/ Basic Employment	(9/1)	1.44	1.52	1.80	2.00	2.19	2.47	2.80	2.86
16 Population/Non-Basic	(13/6)	10.75	9.48	7.17	5.68	5.82	4.47	4.09	4.06

¹Based on Dominion Bureau of Statistics, *Census of Canada*; and Scott's *Industrial Directory*, 1968-69 edition, Pennstock Publications Limited; and *Industrial Survey 1968*, Ontario Department of Trade and Development

²Projections based on "five per cent alternative".

with data relating to the same characteristics for Haldimand-Norfolk and for people engaged in agriculture. Although the data were drawn from the 1961 census, the relative differences were considered to be adequate for the purpose.

Age

Analyses of these comparisons (Table 5) show that over 50 per cent of Hamilton's population is of working age (20-59) compared with only approximately 44 per cent in Haldimand and 47 per cent in Norfolk. In the prime working years of 20-39 the difference is even more significant. On the other hand, the proportions at the two extremes of the age range are higher in the two counties, implying a greater burden for the working population in supporting the very young and the old; however, an easing of this situation can reasonably be expected as time goes on.

Education

The other significant difference is in the average levels of education. In Hamilton,

over 55 per cent of the population had reached high school, compared with approximately 46 per cent in Haldimand and less than 41 per cent in Norfolk. These figures are not necessarily a reflection on the educational efforts of the two counties, but are characteristic of areas with little industry, from which the better educated people tend to migrate to seek employment in the cities. This means that the people of the two counties are probably paying for the education of children who will later contribute to the economy of cities elsewhere. Urbanization and increased employment opportunities in the two counties will gradually correct this situation.

Many of the differences in population characteristics between Hamilton on the one hand and Haldimand and Norfolk on the other are of course accounted for by the differences in industrial composition. The characteristics of Haldimand and Norfolk are comparable with those of the agricultural population generally, while Hamilton reflects those

of the steelworkers. The characteristics of construction workers, who will form a significant element of the population particularly in the early 1970's, generally fall between those of agricultural workers and steelworkers. More than 50 per cent of Ontario's steelworkers, for example, have some high school education compared with 43 per cent of construction workers and 33 per cent of agricultural workers. This will affect the future need for school facilities in the two counties.

Marital Status

Eighty-five per cent of steelworkers, 77.5 per cent of construction workers and 70.5 per cent of agricultural workers are married. This difference reflects the variation in age composition of the three groups: i.e., the higher proportion of industrial workers in the 20-59 age bracket. Correspondingly, the proportion of the population under the age of 20 is higher in the agricultural sector than it is in the steel industry group.

Table 5/Selected Population Characteristics

Population of Hamilton and Haldimand and Norfolk Counties, Ontario Labour Force in Steelworking, Construction and Agriculture							
	Population				Labour Force in Ontario ¹		
	Reference	Haldimand	Norfolk	Hamilton Metro Area	Agriculture	Steel	Construction
1 Working age (20-59)	Percent of population	43.9	46.7	50.3	—	—	—
2 Working age (20-59)	Percent of population over 15 years	65.6	68.8	73.3	75.8	91.9	92.5
3 Some high school education (not attending school)	Percent of population over 5 years	46.1	40.5	55.6	32.8	50.8	42.7
4 Married	Percent of population over 15 years	69.5	70.9	71.5	70.5	85.0	77.5
5 Wage earners					26.8	99.1	89.6
6 Self-employed					56.6	0.9	10.2
7 Unpaid family workers					16.6	—	0.2
8 Time spent on job (wage earners working 40-52 wks per year and at least 35 hours per week)					40.8	83.7	55.7

¹The labour force includes all persons 15 years of age and over who were reported as having a job of any kind, either part time or full time (even if they were not at work) or were reported looking for work, during the week prior to enumeration. Census of Labour Force, 1961 Volume III, Part 1.

3.3 Some Needs of the Future Population

Employment

The proportion of self-employed and unpaid family workers is insignificant in the steel industry, but high in the agricultural force (73 per cent).

Steelworkers spend far more time employed than do the other two groups: over 86 per cent of steelworkers reported 40-52 weeks of employment, and over 84 per cent reported at least 35 hours of work per week. The corresponding proportions for construction workers are 60 per cent and approximately 58 per cent, and for agricultural workers, less than 49 per cent and less than 45 per cent. Thus, steelworkers in the main have a steadier and lengthier working pattern than the other two groups except during strike periods.

Summary

These data suggest that the future population of the Study Area will tend to be better educated, and to have a higher proportion of people of working age, a higher proportion of married people, fewer self-employed members, and fewer people depending on seasonal jobs, than the present population.

3.3.1 Housing

Based on a 1981 population of 125,000 the number of non-farm housing units will have to increase from 19,200 in 1971 to 30,900 (Table 7). This means an additional stock of 11,700 units, allowing for the three per cent minimum vacancy rate considered desirable for a healthy market situation. Replacement of old or dilapidated dwellings is assumed to require an additional 600 units every five years, increasing the total number of new dwellings to be constructed in the ten-year period to 12,900. Replacement of old structures is an important consideration because of the very high proportion of structures built before 1920. According to the 1961 census nearly 64 per cent of the dwellings in Haldimand and over 44 per cent of those in Norfolk – a total of 11,018 units – are more than 50 years old.

As time goes on, the need for housing construction will increase until about 1996, and will taper off thereafter, reflecting the rate of population increase. A total of 62,000 new residential units will be needed in the 15 years following 1981 – double the number of units actually existing in the area in that year. (Hamilton and Brantford, including the new OHC developments at Brantford and Saltfleet, may offer some relief, but in view of the commuting distance, housing outside Haldimand and Norfolk has to be considered strictly as an "emergency" supply.)

The local building industry is not equipped to handle this increasing volume of construction. If it cannot respond adequately, the resulting housing shortage will place increased pressure on seasonal dwellings (conversion of cottages to year-round usage, whether suitable or not). Also, commuting from

outside the area will increase, as will the number of households with lodgers – a normal consequence of a tight housing market.

A housing shortage will create difficulties not only for the newcomers, but also for the established population. Established residents will have to face new housing market conditions because the newly provided housing will cater to the higher income of the newcomers,² thereby in effect creating two separate markets. The increasing incomes of an ever larger proportion of the population will be accompanied by an increasing need for assisted housing, particularly for the elderly. (For a more detailed discussion see Sections 5.3 to 5.6.)

3.3.2 Schools

Whereas much of the cost of housing is paid by the consumer, the financing of schools is the responsibility of the public at large. Again it must be stressed that a great financial burden of educational expansion will fall on both the established and the new residents of the Study Area. School enrolment will of course increase in the area in absolute terms, but not in relation to the total population. Due to the expected difference in age structure between the "established" and the "induced" population, as discussed in Subsection 3.2.2, it is expected that after 1981, as more

²Personal income statistics for the years 1951, 1961 and 1966 show that the highest level of personal income in the Niagara Economic Region (including Norfolk County) occurs in Wentworth County (above the Ontario average) and the lowest in Haldimand and Norfolk (lower than the Ontario average). (Norfolk's position in this ranking suggests that the income of tobacco farmers is regarded as business rather than personal income.)

Table 6/Population in Haldimand-Norfolk, 1966-2001

(Farm, Rural and Urban)

	1966 ¹	1971 ²	1976 ²	1981 ²	1986 ²	1991 ²	1996 ²	2001 ²
Population	80,598	83,450	98,960	125,000	162,000	220,000	309,000	321,000
Farm	22,193	21,000	20,500	20,000	19,000	18,000	17,000	16,000
Non-farm – Rural	28,047	29,150	32,000	34,000	36,000	38,000	40,000	43,000
Non-farm – Urban	30,358	33,300	46,460	71,000	107,000	164,000	252,000	262,000
Five-yearly urban growth	2,942	13,160	24,540	36,000	57,000	88,000	10,000	

Dominion Bureau of Statistics, *Census of Canada*

¹HNS projections.

Table 7/Non-Farm Households and Housing Units in Haldimand-Norfolk, 1966-2001

Persons per non-farm households	3.5	3.4	3.5	3.5	3.4	3.4	3.3	3.3
Non-farm households	16,700	18,600	22,400	30,000	42,000	59,500	88,500	92,500
Vacant units	300	600	670	900	1,550	1,800	2,650	2,700
<i>Non-Farm Housing Units</i>	17,000	19,200	23,070	30,900	43,550	61,300	91,150	95,200
Housing units — rural	7,400	8,400	9,100	9,800	10,500	11,200	11,900	13,000
Housing units — urban	9,600	10,800	13,970	21,100	33,050	50,100	79,250	82,200
Replacement of existing units	N.A.	300	600	600	600	800	800	800
Construction of non-farm units (last 5 years)		2,500 ³	4,470	8,430	12,550	17,850	30,650	4,850

³Estimate based on building permits.

in-migrants settle in the area, elementary school enrolment in relation to the population will drop slightly, and secondary enrolment substantially. Nevertheless, heavy capital expenditures will still be required, for a great number of new schools will have to be built.

In 1969 there were 51 public elementary, 14 separate elementary, and eight secondary schools in the two counties. By 1981, assuming that on average new schools will be comparable in size with existing ones, an additional 28 elementary and three secondary schools will be required to accommodate an additional 8,400 elementary and 2,500 secondary pupils (Table 8), at an estimated construction cost of some \$25,000,000 (1971 dollars), excluding the cost of land. There will also be a growing need for post-secondary education, which may well justify the Study

Area having its own community college by about 1986, despite proposals for the development of local facilities by community colleges outside the area. Should a new college serve an area larger than the two counties, it might be required even earlier. This would probably involve a capital investment of at least \$10,000,000, based on past experience.

3.3.3 Health Services

As the population grows, the needs for health services of all kinds will increase correspondingly at a time of rising per capita health care costs. At the same time, an increasing proportion of the cost of health services is being met by the Federal and Provincial Governments. Of the four major categories of health service — namely, hospital care, public health services, medical services, and dental and associated services — the first three are largely financed directly from the public purse.

Hospital services are currently provided at three different geographic levels: regional; district; and community. As regional hospital facilities are now provided in Hamilton and Brantford, they will probably not be required in the Study Area for some time. But early provision will have to be made for adequate additional district and community facilities, though not necessarily along traditional lines. In the *Seventh Annual Review* (1970) of the Economic Council of Canada some suggestions are made as to how health services might be improved, and at the same time provided more economically:³

"Better planning and co-ordination of treatment systems are required to avoid gaps and overlaps in services. Both needs and opportunities exist for making more sophisticated assessments of future health care requirements by using longer-term planning horizons and taking into account, in a systematic way, data about population trends, urbanization, incomes and other socio-economic factors affecting the pattern of utilization."

Table 8/School Needs in Haldimand-Norfolk, 1969-1981

	1969 ¹		1981		Growth
	Numbers	%	Numbers	%	
Population	83,450	100.0	125,000	100.0	41,550
Elementary Enrolment	16,632	20.0	25,000	20.0	8,368
Secondary Enrolment	6,860	8.3	9,375	7.5	2,515
Average number of pupils in public elementary schools	282		300		
Average number of pupils in secondary schools	858		900		
Number of (all) elementary schools	65		93		28
Number of secondary schools	8		11		3

¹Report of the Minister of Education, Ontario, 1969 (Table 3.241)

"A patient should be cared for at the most economic level consistent with his medical needs. This implies the provision of less-expensive but adequate alternative facilities for mild, chronic, geriatric, ambulatory and convalescent cases outside hospital wards — in out-patient clinics, nursing homes, homes for the elderly or in private homes. If such additional facilities and services were available, costly hospital accommodation and treatment could be generally more restricted to acute and emergency cases. When cases treated in hospitals cease to be critical, they could be moved to the less costly facilities. Indeed, development of such facilities, with appropriate procedures for making them an integral part of overall health care systems, might release as much as 25 to 30 per cent of

³Economic Council of Canada, *Seventh Annual Review*, 1970, pp. 50-51.

3.4 Land Use

existing beds in many hospitals for patients requiring intensive care. Perhaps this change could be accomplished by means of financial incentives originating from the government health agencies but extending beyond the hospital throughout the entire health care system. This approach would require a highly competent and efficient screening procedure (i.e. testing and referral), perhaps as an integral part of expanded hospital out-patient departments. The potential savings from such reorganization, while they should not be exaggerated, may still be considerable. In this context, careful consideration should be given to enlarged public support for more adequate nursing-home facilities, as well as for limited nursing care, as may be required, for individuals in their own homes."

Substantial new capital investment in hospitals in the Study Area will be required in any case. If the provision of future health services is comprehensively planned on an area-wide, rather than on a purely local, scale, a variety of specialized health institutions can be provided.

Similar principles were expressed in the recently completed Norfolk (Simcoe) and West Haldimand General Hospital (Hagersville) "Role Study".⁴ The "Role Study" states that for the next four or five years the emphasis should be on better use of existing facilities. Hospital expansions to provide more active care beds should follow only thereafter. The "Role Study" also recommends a regional approach through the establishment of a Regional Health Planning Council. These recommendations are fully endorsed.

In view of this possible restructuring of hospital and hospital-related care, no attempt was made to estimate the nature or cost of the required facilities because no standards corresponding with such a comprehensive care system are available.

⁴Agnew Peckham and Associates, Ltd., "Role Study", Norfolk General Hospital, Simcoe, and the West Haldimand General Hospital, Hagersville, December, 1970.

Of the total land area of Haldimand-Norfolk (718,080 acres, or 1,122 square miles) almost 84 per cent was rural, mainly farmland, in 1966. A total of 9,232 acres lay within the boundaries of incorporated towns and villages, but only about 6,000 acres, or 0.8 per cent of the total land area, were actually occupied by urban uses (Table 9).

In addition to urban areas and farms, quasi-urban uses (open in character) amounted to over 15 per cent of the area in 1966. There were 11,700 acres of publicly owned natural and recreational lands (Provincial and county parks and forests, and areas managed by conservation authorities) and an even larger area of recreational land in private ownership (Turkey Point and Long Point Companies, Sand Hills Park, and land occupied by summer cottages). These recreational areas serve not only the residents of the two counties, but also many visitors from much further afield. Therefore, in Table 9 they are separated from parks within towns and villages whose main purpose is to serve local

Table 9/Land Use in Haldimand-Norfolk, 1966-2001

(Land actually developed as shown below, and irrespective of boundaries of urban municipalities)
Figures Relating to Land Given in Acres

	1966 (a)		1981		2001	
	No.	%	No.	%	No.	%
1 Total Population	80,598		125,000		321,000	
2 Non-farm population	58,405		105,000		305,000	
3 Total Land (4 + 12)	718,080	100.0	718,080	100.0	718,080	100.0
4 Urban Land (5 to 11)	6,000	0.8	10,200	1.4	26,350	3.7
5 Residential (non-farm)	3,200		5,050		11,000	
6 Net Residential Density per acre	(18)		(25)		(35)	
7 Industry, commerce	800		1,850		7,000	
8 Institutional	(b)	600	1,000		1,850	
9 Roads, utilities	(e)	700	1,000		3,000	
10 Recreational — Local	(d)	600	1,000		3,000	
11 Other		100	300		500	
12 Open Land (13 + 14)	712,080	99.2	707,880	98.6	691,730	96.3
13 Farms	602,552	83.0				
14 Quasi-urban (15 + 16 + 17)	109,530					
15 Recreational — Public	(d)	11,700	1.7			
16 Recreational — Private	(d)	97,830	13.6			
17 Transportation Utilities, other	(e)					

a) Land use breakdown estimated.

b) Institutions in rural areas included.

c) Changed densities applied to additional population only.

d) Recreational uses are classified as local (urban) and regional as well as by public and private ownership.

e) Interurban only. Intraurban transportation is included in "Urban Land".

3.5 Summary: The Future Perspective⁵

residents (Subsection 7.4.1). Some land has also been allocated to interurban transportation (highways and other roads, railways, etc.), as distinct from roads and streets within urban areas. The latter are included under the heading of "Urban Land" in Table 9.

Corresponding with the distinction between the incorporated areas of towns and villages and the smaller areas actually in urban use, the projections shown in Table 9 are related only to land areas actually developed for a particular use. They are in no way related to the possible areas of future municipalities, nor to the areas of land which may be designated for specific uses, but not yet so developed. This distinction is extremely important because in establishing new municipal boundaries it may well be appropriate to leave ample elbow-room for continuing long-term expansion. Similarly, in the allocation of land uses in local official plans (as distinct from zoning by-laws) reasonable reserves must be provided to allow some flexibility in development, to avoid monopoly conditions, and to permit the advance preparation of land for later development. Thus, the forecast that by 1981 some 5,050 acres will be in non-farm residential use does not imply that only this area of land should be designated, zoned or serviced. Reserves of land for later development should be made available at a rate corresponding to the pace of actual development. This principle applies also to areas intended for industrial development, as discussed in Section 6.3.

One of the most important facts about the future of Haldimand-Norfolk is the very small proportion of the total land area that will be required for urban development: 1.4 per cent in 1981 and 3.7 per cent in 2001. *Throughout most of the Study Area, the rural, open character of the present landscape will remain.* In these open areas less land will be used for farming, but more will be conserved in its natural state for recreational and related uses as well as for interurban transportation and utilities (Chapters 7 and 8).

To provide a general perspective for long-range planning for Haldimand-Norfolk, the coming years may be divided into three broad time-periods or development phases: a "period of awakening"; a "period of early development", during which special problems will be encountered; and a "period of maturity".

Period of Awakening (1971-1980)
This is the present stage, when the first significant evidence of change is beginning to show. Assembly of land by private developers has begun and with it a rising spiral of land and housing costs. Economic problems are being created for the farmer, and the tax base is being reduced by removal of improvements and the taking of land out of production. Thus, the burden on local taxpayers is increasing.

This period is characterized by uncertainty and exaggerated expectations for the future. There are no financial compensations for the community, but some individuals secure substantial financial gains – or expect to – bringing about a clash between private and public interest.

No burden of public expenditure is created, but taxes tend to rise nevertheless.

Some characteristics of this phase carry over into later periods, but become less dominant.

Period of Early Development (1981-1996)
Extensive and swift urbanization of an area of farms and small towns will require the rapid creation of an almost totally new urban infrastructure. The volume of growth will not in itself create the problem, but its scale in relation to the present size and rate of growth of existing urban centres will – the smaller the tax base, the more onerous the additional burdens. The problem lies in the inability to strike a balance between the tax revenues and the additional expenditures arising from new growth.

⁵This section is taken largely from the 1970 report of the Haldimand-Norfolk Study: *Towards a Land Use Plan for Haldimand Norfolk.*

Regardless of what area development concept is finally adopted, it will impose heavy demands on all resources. These demands will be experienced at a time of rapid growth in the Canadian economy, resulting in strong competition for limited resources, public and private. In particular, the high cost of capital could have grave implications.

To illustrate the magnitude of expenditures required, it must be understood that apart from the piped services, roads and community facilities normally required in older Canadian cities, provision will have to be made for an unusually young population, with consequent heavy demands for schools, larger-than-average dwellings, sports facilities, etc. In other words, substantially more social capital per taxpayer will be required than in older cities.

Development in the Study Area will be a continuous process for many years to come, but it will occur very rapidly at some times and will take place more slowly and evenly at others. The requirements for added facilities will grow correspondingly. The need for further investments will become apparent before existing facilities have been paid for. Should resources not be available, a freeze on new development would be the only way to catch up on the public facilities already needed. The alternatives would be either inferior community facilities, or bankruptcy. Neither of these is acceptable, and either would prevent or retard continuing growth.

The present system of municipal finance reflects the needs of established and fairly stable municipalities; it is not adapted to conditions of extremely rapid growth. Thus special financial arrangements will be both necessary and fully justified during this period.

Period of Maturity (1996-)
This stage is reached once there exists an adequate taxation base with a relatively sound capacity to provide for additional social investments. By this time the special financial arrangements made to facilitate development will no longer be needed. The development has matured: it no longer suffers from growing pains.

4.1 An Urban Strategy

From the projections in the preceding chapter, it is clear that the key planning problem confronting Haldimand-Norfolk is to accommodate a new urban population of about 250,000 by the end of this century.

Housing needs in the area can be met in the immediate future by expanding existing communities to the limits of their water supply and sewerage. The "ceiling" imposed by these services (as now available or planned) will be reached soon after 1976. During the intervening period, a regional trunk servicing system must be planned and built to permit the continued growth of most inland communities (Section 4.3).

To accommodate the much greater scale of growth beginning in the late 1970's, four basic alternative concepts were considered:

1) To continue to distribute urban development more or less evenly over the ten existing urban communities in the two counties. This was rejected principally because it would be increasingly uneconomical in terms of the provision of "hard" services (water, sewerage, transportation). Also, it would be very difficult to implement because workers employed in the Nanticoke area would tend to gravitate to the communities nearby, such as Simcoe, Port Dover and Jarvis, rather than to the more distant ones, such as Dunnville, Caledonia, Delhi and Port Rowan. And even if it could be achieved, it would leave the two counties without a really large town to provide a range of urban services beyond the capacity of a scattering of smaller communities.

2) To accommodate the bulk of the "induced" population in outside cities such as Hamilton and Brantford. In part, this is built into any proposed strategy by the assumption that 75 per cent of the industrial development generated by Stelco will in fact be located outside Haldimand-Norfolk. But as a total solution it was rejected because it would require very large expenditures on greatly improved means of transportation to the Nanticoke area; it would lead to strong and continuing pressures to

permit development closer to Nanticoke, that would require extremely rigid controls to resist; and like the first alternative, it would leave the Study Area without a strong urban centre of its own. In effect, it would leave Haldimand-Norfolk to be a kind of "economic colony", having to tolerate the various annoyances inseparable from large-scale industrial growth without obtaining any significant compensations in the way of better facilities and community services. On the other hand, it must be pointed out that if considered in the context of a broader regional policy, it could possibly be regarded as a desirable strategy.

3) To create a large new urban centre more or less equidistant from Nanticoke and Port Burwell to accommodate the growth generated both by the Nanticoke industries and by Dofasco. Apart from several other disadvantages, it was concluded that this would be impracticable due to the long commuting distance in both directions and to the great difference in timing between the projected industrial developments.

4) To plan for a system, or "hierarchy", of urban places focused on a fairly large new centre located reasonably close to Nanticoke. This course of action did not suffer from any of the disadvantages involved in the other three, and is the strategy recommended for urban growth over roughly the next 30 years.

Any settled area, from a township to a region, tends to develop its own urban focal point as the main supplier of services (shopping, entertainment, education, government services, etc.). This is a "natural" process in that it usually happens simply because it is most convenient to the providers and the users of the services. The scale of the centre and the level of services range from the hamlet with one general store to the metropolis with several large department stores and hundreds of specialized shops. Below a certain size, a town cannot supply many important urban services. On the other hand, once a very large size is reached, continuing growth may provide only a small marginal increase in the level of services

to offset growing disadvantages, but this implies a city scale that cannot now be foreseen in Haldimand-Norfolk.

Towns and cities are not only the products, but also the agents, of change. If they do not perform adequately, the whole area they serve will suffer and its development will be retarded. Conversely, the promise of good living conditions, both urban and rural, and a wide range of community services, will attract entrepreneurs, investors and new sources of employment, while concentrated development encourages the emergence of specialized services (for businesses and residents alike) through economies of scale. Consequently, the development of a range of healthy urban environments in Haldimand-Norfolk to complement its present outdoor attractions will help to provide conditions conducive to both social and economic wellbeing. In so doing, it will go far to remedy certain problems identified in the course of the Regional Development Programme (*Design for Development, Niagara (South Ontario) Region, Phase 1*).

This is the basic argument for a long-term urban development strategy aimed at creating a strong urban focal point for Haldimand-Norfolk, complemented by a number of healthy, growing, but distinctly smaller, urban communities. Its success will depend very much on starting development of the main centre at the right time, on maintaining the right pace of growth, and on the right choice of a site. After careful examination of three principal alternatives – one in Woodhouse Township, southeast of Simcoe; one in Oneida Township; and one east of Selkirk (previously referred to respectively as Alternatives West, North and East) – the first (henceforth referred to for convenience as Woodhouse New Town¹) was chosen as on balance the most satisfactory.¹ The reasons for this choice are discussed in Subsection 4.2.1.

¹In the first edition of this report Woodhouse New Town was referred to as "Lynn". The name "Lynn" appears on Map 1, but should now be read as "Woodhouse New Town".

Strategy for Existing Communities

It cannot be too strongly emphasized that the proposed strategy is not intended to build up an overwhelmingly dominant city at the expense of other communities. This would be thoroughly undesirable. The objective is to maintain a balance between a strong centre and a set of equally healthy sub-centres providing more localized general services (and possibly also certain specialized area-wide services; for example, a community college campus might be located in or near a sub-centre rather than in the main centre). Thus, the policy does not imply any attempt to impose artificial restraints on the smaller urban places. On the contrary, an essential part of the over-all strategy is to maintain the health of the existing communities as an integral part of a balanced urban structure for the area as a whole.

This does not imply, however, that all of these communities will grow equally rapidly. The pace and character of their future development will be governed by three general considerations.

1) The desirable goal is a distribution of service centres such that no resident of the area has to travel an inconvenient distance for everyday needs. On the other hand, with increasing mobility (e.g., more two-car families), "convenient" distances increase also, so that such centres can be fewer and more widely spaced – but at the same time larger and more diversified, as they serve more people. This means (as statistics verify) that the larger communities are likely to grow more rapidly than the smaller ones, which tend to grow slowly, or not at all, or even to decline. While in Haldimand-Norfolk this trend may be offset by rapid over-all population increase, variations in growth rates are inevitable and to attempt to encourage every hamlet to grow into a village and then into a town would serve no useful purpose. A more practical objective is to foster the growth of a well-distributed but limited number of local centres, each of which can serve its own market area with a reasonably diversified range of services, and which can in turn be economically supplied with water and sewerage.

2) The growth of some urban places will be restricted by such factors as physical constraints, proximity to sources of air pollution, or difficulty of providing water supply and sewage disposal services.

3) Some communities may find a specialized role within the total area system. The possible establishment of a community college campus in or near one of the present towns or villages has already been suggested as an example.

Thus, a long-range policy for the existing communities has the following elements:

a) Continuing growth, at a moderate rate, of those towns and villages which either are well located to service local market areas, or have other intrinsic potential for economic development, and can be served reasonably economically by a regional or sub-regional water supply and sewerage system.

b) Growth of communities (hamlets) too small to be viable in economic or servicing terms not to be encouraged, except where the development of a new local centre would fill a gap in the existing structure or otherwise serve a useful purpose. Also, growth not to be encouraged "artificially" in larger communities where external conditions militate against it.

The Strategy for Woodhouse New Town

The rationale of the recommended over-all urban strategy requires that Woodhouse New Town should as soon as possible become large enough to provide a distinctly higher level of services and opportunities than is now available within the Study Area – for example, a department store, a theatre and specialized professional services. Experience indicates that a minimum population of about 100,000 is required. Too long a delay in starting the development of Woodhouse New Town would defeat this purpose, since the new centre would have to compete with other communities already much larger than they are today and growing rapidly. Its own growth would then be inevitably retarded. This would certainly happen if the

development of Woodhouse New Town were not to start by the time a regional servicing system removes the development limitations imposed on the existing communities. There is therefore a delicate relationship in timing between the end of capacity for further urban growth on existing local piped services; the availability of a regional servicing system; and the birth of Woodhouse New Town. It is strongly recommended that the three should coincide.

Once the initial "target" population of Woodhouse New Town is reached (probably between 100,000 and 150,000), two basic strategies are possible. One is to allow the new town to continue as the principal development concentration; the other is to divert the bulk of new growth to another area or areas, perhaps Alternatives North or East. This decision will have to be made well before the Woodhouse site reaches its development capacity. As the exact pace of development is uncertain, continuous monitoring will be required to initiate decision-making and action at the appropriate time. If continuing growth of Woodhouse New Town is the policy decided on, the direction of expansion should be northward, into the southwest quadrant of Townsend Township, and planning would have to be adjusted to a much larger scale: i.e., a population of about a quarter of a million. If large-scale development is diverted elsewhere, Woodhouse New Town's initial growth momentum would probably maintain its position as the largest urban centre in the area, but service functions would be increasingly shared with another centre or centres. In this case, careful planning would be required – particularly with respect to efficient interurban transportation – to ensure the maintenance of a complementary relationship among urban centres and of an over-all level of service comparable with that provided by a single city.

The choice between these two basic long-term strategies need not, and indeed should not, be made now. An early decision would help in determining key elements in the development plan of Woodhouse New Town itself – for example, the location of the "city centre"

4.2 The New Urban Centre

and the scale of development which will have to be allowed for there. But this should not be allowed to precipitate decisions which would be premature in terms of regional development policy. It is also most important that no action be taken that would prejudice any of the alternatives. This applies particularly to the selection of routes for new highways and the planning of regional systems of water supply and sewerage.

Summary

The eventual outcome of the over-all strategy, in terms of an urban pattern of 50 or 100 years from now, cannot be foreseen with any certainty. Urban growth and change in Haldimand-Norfolk will necessarily reflect social and technological dynamism, and any attempt to predetermine the future urban system is being carefully and indeed deliberately avoided. In this sense there is no "long-range" policy other than a continuing effort to anticipate and adapt to changing conditions and needs. Where urban growth is concerned, the only realistic course is to establish pragmatic policies for rather limited time periods, to maintain as much flexibility as possible, and to be constantly ready to adapt to new circumstances.

In summary, the following periods can be clearly distinguished in the urban development of Haldimand-Norfolk over the next few decades:

Period 1

First Phase (1971-1975) – growth of the existing communities without any change in the basic urban pattern of the two counties;

Second Phase (1976-1980) – emergence and fairly rapid growth of the new centre, paralleled by continuing (but, in absolute terms, less rapid) growth of existing communities;

Period 2

Third Phase (1981-1995) – increasing dominance of the new centre, accompanied by continued growth of existing communities.

Fourth Phase (post-1995) – emergence of a new regional urban pattern based on long-range regional development plans.

The Woodhouse New Town proposal is the key to the future urban growth strategy for Haldimand-Norfolk. As such, its importance warrants a more detailed exposition of the considerations underlying the choice of location, and of the principles which should guide its development.

4.2.1 Location Factors

The HNS report of March 1970, *Towards a Land Use Plan for Haldimand Norfolk*, presented ten considerations affecting the choice of a location for a new urban centre. Summarized, these were substantially the following:

- 1) Satisfactory relationship to over-all regional development strategies;
- 2) Flexibility, in the sense of ability to fit into a variety of long-term growth patterns;
- 3) Avoidance of a "company town" character by providing the greatest possible diversity of employment opportunities;
- 4) The advantages of a lakeshore site, balanced against the need to protect the lakeshore for high-priority needs;
- 5) Relationship to regional and inter-regional transportation networks;
- 6) Commuting time-distance from the Nanticoke area;
- 7) The economical provision of water supply and sewerage, consistent with protection of the environment;
- 8) Avoidance of areas likely to be significantly affected by air pollution;
- 9) Preference for use of land of low agricultural quality;
- 10) The advantages and disadvantages of building on an existing urban nucleus versus those of a virgin site.

The report pointed out that considerations (6) and (8) set, respectively, the outer and inner limits, relative to the Nanticoke area, of the zone in which the new centre could be located.

Not surprisingly, it turned out that no location is ideal in terms of all ten considerations. However, there were three which seemed on balance to be fairly satisfactory. These were:

- 1) Alternative West, between Simcoe and Port Dover;
- 2) Alternative North, in Oneida Township;
- 3) Alternative East, in Rainham-South Cayuga Townships.

In the Bechtel Study (Section 2.3) 11 locations were examined. The three which received the highest ranking in relation to the criteria used by Bechtel were in the vicinities of Port Dover, Simcoe and Jarvis respectively (*i.e.*, all closely related to Alternative West), a site immediately north of Port Dover being recommended as the best choice.

The Bechtel Study calculated that the townsitc would require some 11,500 acres. In defining the precise locations and approximate boundaries of the actual site, it was necessary to take into account both the physical characteristics of the Simcoe-Port Dover-Jarvis area, and the ten criteria set out in *Towards a Land Use Plan for Haldimand Norfolk*. Taking all these factors into consideration, it was concluded that the most suitable site for the new centre would consist of the lands bounded roughly by the CNR line, the Lynn River and Black Creek. This corresponds closely to Alternative West, and comprises about a third of the territory of Woodhouse Township (Map 1).

This site has six major assets.

- 1) It is well related to the existing regional and interregional transportation network and to the future development of that network, and allows considerable flexibility in the planning of long-term regional growth patterns in relation to the transportation network.
- 2) It is within easy commuting distance of the Nanticoke area, without being so close as to be threatened by significant air pollution.
- 3) It can readily and economically be supplied with water and sewerage, and is not dependent on a regional system of piped services.

4) Proximity to Simcoe and Port Dover can alleviate such problems as the lack of community and commercial services in the early stages of development, while also providing a resource of local leadership.

The close relationship to these two established towns, with their own types of economic base, can also reduce the risk of a company town character.

5) Because of its locational advantages it is an area where development pressures would in any case tend to be very strong. This will favour rapid growth and enable Woodhouse New Town to reach fairly quickly a size large enough to provide a range of specialized services not now available in the Study Area.

6) The site has very high potential for outdoor recreation, including the lakeshore and the Lynn and Black Creek valleys. On the other hand, special care will be needed to ensure that these assets are protected from both urban encroachment and water pollution.

Since the proposed site is closer to the Nanticoke industrial area than other possible locations, the danger of air pollution was very carefully examined in collaboration with the Air Management Branch of the Department of Energy and Resources Management, a precaution clearly imperative in view of the recommendation in the first draft of the Chanasyk report (Section 2.3) that "... zones of heavy industry along the lakeshore should be separated from residential areas by sectors about eight to ten miles in radius". However, it was concluded that the level of emissions from newly established industries in the Nanticoke area, under the standards imposed by Provincial air management regulations,² would not be high enough to justify the restriction of urban development beyond three miles from the perimeter of the industrial area. Measured from the western and north-western limits of the Stelco site, this approximates the standard originally suggested in *Towards a Land Use Plan*

for Haldimand Norfolk and is comparable also with the recommendations of the Joint Study Committee. Provided that no future pollution-generating industries are permitted to locate west of the Stelco site, most of the proposed urban site would be unaffected. A small portion immediately to the west of Black Creek would fall within the three-mile "exclusion zone", but this area could be reserved for non-residential uses.

On this basis it was determined that the Woodhouse site need not be eliminated because of air pollution risk. But the enforcement of rigid emission control standards, and making allowance for air pollution in site planning, will be critically important.

The other two locations originally identified (Alternatives North and East) are by no means eliminated from future consideration, although each is subject to disadvantages which make it less suitable for the first phase of large-scale growth.

North (Oneida) would be relatively difficult and expensive to provide with piped services and could present construction problems due to the existence of bedrock near the land surface in the southern part of the prospective development area.

East (Rainham-South Cayuga), though convenient to Nanticoke, is otherwise somewhat isolated by the Grand River and would therefore be particularly vulnerable to becoming in effect a company town.

In both cases, however, the present disadvantages could diminish substantially as the whole area develops and as new transportation facilities and piped service systems are created. Thus, either or both locations could be suitable for large-scale urban development in the future.

The choice among the three locations is partly a matter of timing. The Woodhouse site seems best in present circumstances. Before the start of substantial development there, however, changes in circumstances, including government

policies, could dictate a reappraisal of the choice of location. For example, planning for the growth of the Hamilton area might suggest the desirability of creating a residential satellite, for which Oneida Township could be suitable. Alternative North might then be preferable to West on the basis of a dual-purpose role related to both Hamilton and Nanticoke.

4.2.2 Development Principles

Planning for new towns and new cities in the past has generally assumed a fairly definite population ceiling to be attained within a limited period of time, permitting (at least theoretically) a fairly precise and detailed, thus inevitably somewhat rigid, townsite plan. Often, social considerations have been subordinated to physical design. This approach will not do for Woodhouse New Town, for it will not be an artificial creation brought into being to serve public policy, but the "natural" outcome of economic growth. It will be an independent working and service community serving the needs of people employed in the vicinity. As long as its economic base continues to expand, Woodhouse New Town will grow, even if other new urban centres come into existence nearby.

The basic principles of the Woodhouse New Town plan must therefore be adaptability, flexibility and diversity. The working objective for the foreseeable period of growth should be to accommodate up to 150,000 people in the Woodhouse-Simcoe-Port Dover complex; but its planning must allow for its eventual size to be much greater.

The plan must allow for continuing adjustment to new needs and conditions, both social and technological. It should allow for broad diversity in the type and manner of physical development, not only in the narrow (though important) sense of providing for different needs as determined, for example, by family size and income, but also in encouraging variety, experiment and participation of both public and private enterprise. In short, the plan for Woodhouse New Town should not be a rigid blueprint but a broad and flexible framework for growth and change.

²The Air Pollution Control Act, S.O. 1967 C.3, O. Reg. 133/70.

This is very far from saying that good planning (or good design) is unimportant. Adherence to the principles outlined would in fact require planning skills of a high order. Effective public control of the site in the beginning is essential. But this does not necessarily imply exclusive or even dominant public development once the plan framework, and the administrative controls to assure its implementation, have been established.

In addition to the general aims of adaptability, diversity and flexibility, the plan should have the following more specific objectives:

1) Retention of Simcoe and Port Dover as distinct entities within the eventual urban complex. At the same time, Simcoe in particular will eventually be very much an integral part of the urban complex. Its growth during perhaps the next decade can be regarded in that sense as the first stage in the development of Woodhouse New Town. The next stage would probably include a start on a new "city centre" (Woodhouse New Town) which would ultimately leave the present Simcoe central business district as a local commercial sub-centre. Port Dover, though also in one sense part of the Woodhouse New Town complex, can be expected and indeed should be encouraged to retain a distinctive role as a resort, recreation and entertainment town (Subsection 7.4.1). This separate identity could be emphasized by permanent physical separation.

2) The protection of the lakeshore and the Lynn and Black Creek valleys is of central importance. These areas should be placed in public ownership in the early stages of implementation of the Haldimand-Norfolk plan. Identified in the Chanasyk report as "strategic multiple-use natural areas", they will be doubly important to Woodhouse New Town, as natural recreation areas, conservation resources and, in the case of Black Creek, a natural "buffer" between the predominantly residential development on one side and the industrial complex (and its attendant pollution) on the other. At the same time the pressure for misuse of these key natural areas will be very high. Thus perhaps the most urgent step

involved in the Woodhouse New Town proposal is to ensure their protection. Later, careful planning for optimum multiple use will be essential.

3) Woodhouse New Town should not be planned as a purely residential community. Even though the reorganization of municipal government may eliminate the traditional need for an industrial tax base, the townsite plan should include provision for industrial areas (Section 6.4) to help to diversify the economic base and the opportunities for employment (which will inevitably be heavily dominated by Stelco), and in particular to provide job opportunities for women. The present Simcoe industrial estate in the southeastern part of the town would provide the nucleus of one industrial area.

The Woodhouse New Town industrial areas should accommodate only enterprises maintaining performance standards suitable to proximity to residential areas: *i.e.*, relatively quiet, inoffensive, pollution-free plants not generating heavy traffic (Section 6.4).

4.2.3 Initial Objectives and Policies

The following actions should be taken as soon as the development of Woodhouse New Town is approved as Government policy.

1) The Government should either secure the site immediately by option, purchase or expropriation, or take whatever other measures are necessary to avoid speculation, inflation of land values, and development inconsistent with the Woodhouse New Town proposal, pending later public acquisition. This recommendation does not necessarily imply the exclusion of private development. Failure to acquire the land prior to development, however, would almost certainly frustrate effective planning and defeat the objectives of public policy by encouraging land speculation and haphazard development. Extensive public land ownership is essential also to protect such natural features as the Lynn and Black Creek valleys and the lakeshore, which should be acquired by an appropriate public agency or agencies

as soon as possible, and in the meantime be protected from misuse by appropriate land use controls. (This would in fact be desirable in any case in view of the development pressures to be expected in the area.)

2) The necessary steps should be taken to ensure that future planning is not hampered by actions inconsistent with the intended development of the site. In particular, this applies to the proposed construction by the CPR of a spur line from Simcoe to serve the Stelco plant, and by Ontario Hydro of new transmission lines westward from their Nanticoke Generating Station. Pending the preparation and adoption of a development plan for Woodhouse New Town, all activities affecting the site for which the Ontario Government is responsible should be subject to the approval of the Minister of Municipal Affairs or of the Woodhouse New Town Development Corporation. Every effort should be made to secure the cooperation of the Government of Canada with respect to activities under its jurisdiction.

3) The Community Planning Branch of the Department of Municipal Affairs should review the official plans, zoning by-laws and land division controls of Woodhouse Township and all adjacent municipalities, and initiate any actions required to ensure effective control of the development of privately owned land, in conformity with the objective of ensuring the orderly development of the new urban centre.

4) Suitable growth boundaries should be defined for Simcoe and Port Dover within the context of the over-all Woodhouse New Town development plan, and the growth of the two towns within these boundaries should be encouraged. At the same time, new urban renewal studies of both towns should be undertaken in the light of their new development prospects. Plans currently under study for the central business district of Simcoe should similarly be examined in the same terms.

5) Careful study should be given to the control of pollution of the Lynn River

pending the availability of new sewage treatment facilities on the lakeshore.

6) The financial implications of the Woodhouse New Town proposal for Woodhouse Township should be closely examined.

The following measures are less urgent but should be initiated not less than five years before the actual start of development, which should be timed to coincide with the completion of a regional servicing system:

7) The establishment of a Woodhouse New Town Development Corporation. This is elaborated on in Section 9.3.

8) The preparation of a development plan for the site (Section 5.6 (1)).

5.1 Introduction

Chapter 3 of this Report has outlined the future needs for housing, community facilities and urban land in the Study Area as a whole. Chapter 4 has described the over-all strategy proposed to meet these needs. This chapter is concerned in more detail with the distribution of urban growth over the next decade, with the means of meeting short-term housing needs, and with some of the prospects and problems of specific communities.

The discussion which follows rests on a basic assumption: *that for purposes of allocation of housing supply the Study Area can be treated as a unit*. This assumption is made because it must be. Traditionally, and for very practical financial reasons, municipalities have attempted to achieve a balance between industrial and residential development to maintain a healthy assessment structure. Often, this has led to competition for tax-producing industry and reluctance to accommodate tax-consuming housing. The conditions confronting Haldimand-Norfolk will not allow of such an approach. If short-term housing needs are to be met, the physical capacity of every urban municipality must be fully used. It must therefore be assumed that the fiscal structure of the Study Area will be adapted to the exigencies of social needs. This will be a key consideration in the second phase of the Haldimand-Norfolk Study, the review of local government.

Traditional local attitudes concerning a "fair" distribution of development among municipalities may be difficult to overcome. The legitimate desire of existing urban communities to maintain their identity and a degree of self-sufficiency is fully recognized. Such a goal is indeed desirable, not only in terms of the urban strategy described in Chapter 4, but also to enable these communities to participate effectively in the future political structure of the Study Area. Nevertheless, a sound over-all development pattern can be achieved only if the people and the decision-makers of Haldimand-Norfolk can recognize the urgent need, in contemporary conditions, to think in terms of a broader regional community.

These principles being accepted, the key determinant of urban growth distribution in the immediate future will be the availability of water supply and sewerage. This question, together with waste disposal, will therefore be dealt with next.

5.2 Water Supply and Waste Disposal

At present, the supply of water and the disposal of sewage in Haldimand and Norfolk is the responsibility of the 28 local municipalities, under the general supervision of the Ontario Water Resources Commission. In some cases financial assistance is provided by the OWRC through agreements with municipalities. These agreements place the legal responsibility for a particular facility with the Commission. Garbage disposal is similarly the responsibility of the local municipalities, under the supervision of the Waste Management Branch, Department of Energy and Resources Management.

This every-man-for-himself approach has not, on the whole, produced satisfactory results.

Sources of water are diverse, including Lake Erie, the Grand River, several smaller streams, and ground water. Although the treated water from these sources is bacteriologically safe, the chemical quality is in some cases distinctly poor. Where Lake Erie or the Grand River is the source of supply, the quantity of water available is effectively limited only by the capacity of the treatment plant or of the main feeder pipeline. But where the source is a relatively small stream, as in Delhi, the quantity available is ultimately limited by the size of the drainage basin upstream of the intake. Where it is ground water as in Simcoe, Caledonia, Hagersville and Waterford, there is likewise an absolute limitation in the ability of the aquifer to be recharged by precipitation. A small municipality suffering either from poor quality of water, or a limited supply, faces an almost insuperable problem in attempting to correct the situation on its own.

Disposal of sanitary sewage from sewer systems involves treatment, followed by discharge of the treated effluent into a receiving stream or large water body. Of the ten urban municipalities in Haldimand and Norfolk, one (Port Rowan) has no form of treatment (though a lagoon is proposed), and five (Waterford, Hagersville, Jarvis, Delhi, and Simcoe) discharge their effluent into watercourses with limited receiving

SERVICING PROBLEMS OF EXISTING MUNICIPALITIES

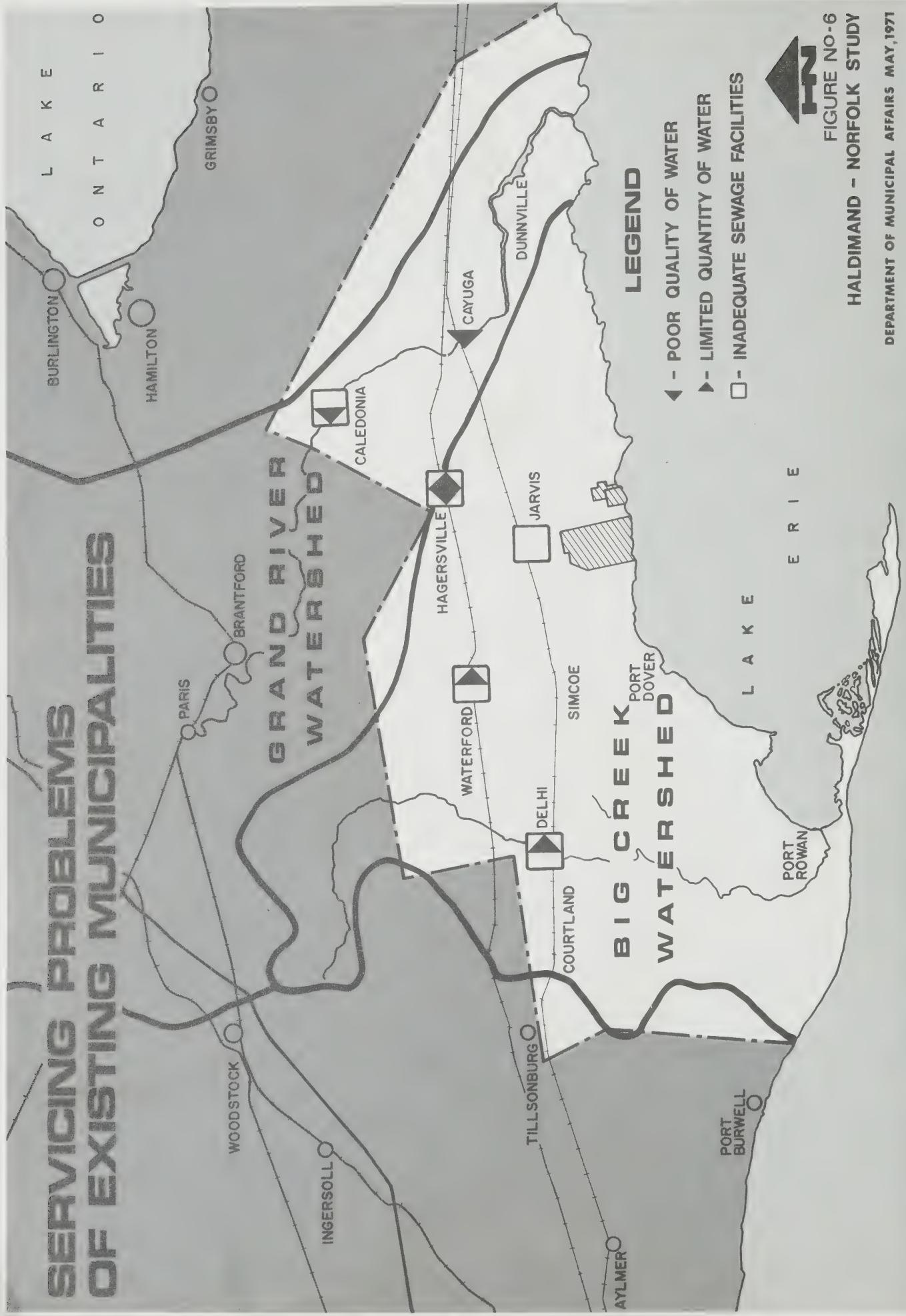


FIGURE NO-6
HALDIMAND - NORFOLK STUDY

DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

capacity. Once this capacity has been reached, any increase in the volume of effluent will result in unacceptable deterioration of the stream. A community in this position must then either provide a higher level of treatment, or construct a pipeline to carry its effluent to receiving water with greater assimilation capacity. Hagersville, Jarvis, Waterford and Delhi are already at or near this point, and Simcoe will eventually face the same situation. Only Caledonia, Cayuga and Dunnville on the Grand River, and Port Dover and Port Rowan on Lake Erie, have receiving water adequate for growth in the near future.

In total, present water supply and sewage treatment facilities in the two counties (in operation, under construction or firmly planned) will provide for an additional population of almost 21,000, sufficient to meet urban growth needs only to about 1977 (Table 6).

This, furthermore, assumes no major new industrial demands on the local water supplies, a factor which in practice could make a very substantial difference to the population growth capacity of the existing communities. As illustration, a "dry" industry, (one not considered as a heavy water-user) employing 3,000 workers, requires as much water as a resident population of 1,000; the amount of water which has to be supplied in Simcoe is roughly doubled by its two canneries. (Conversely, the price of water can be a very important locational determinant, involving a difference in total operating costs of as much as \$50,000 annually for an industry using half a million gallons of water a day.)

Small communities such as Langton, Selkirk and Fisherville, lacking communal water and sewage servicing altogether, present a different kind of problem. This is true also of many cottage areas. For example, in Walpole Township, where there are about 900 cottages on small lots, many septic tank and field tile systems are malfunctioning, with the result that individual wells and roadside ditches are being polluted. This situation is aggravated by the con-

version of some summer cottages into year-round dwellings. There is also the possibility of additional cottages being erected on about 300 vacant lots. Although in present circumstances cottages are regarded as a financial asset to the municipality, this would change drastically once they had to be supplied with "urban" water and sewer services.

The garbage disposal situation is no more satisfactory. Of the 31 disposal sites in the two counties, only two are considered "good" by the Waste Management Branch, while 11 should preferably or definitely be abandoned. The remaining 18 are potentially acceptable with reservations. Thus, most of the existing municipal dumps do not now meet provincial standards. While some could be improved to meet the required standards, more than a third cannot and will therefore eventually be subject to closure.

To meet the water needs of communities in the central part of the Study Area (Caledonia, Cayuga, Hagersville, Jarvis and eventually Port Dover and Woodhouse New Town), together with those of Brantford and the Kitchener-Waterloo area, the Ontario Water Resources Commission has proposed the construction of a trunk pipeline extending north from Lake Erie. Arrangements have already been made for Ontario Hydro to incorporate into the design of a second water intake for the Nanticoke Generating Station sufficient capacity to meet projected municipal and industrial water demand as well as its own needs. A site for the proposed water purification plant has also been acquired.

Since Simcoe and Waterford seem to have sufficient ground water available locally, they will be able to meet their own water demands for the immediate future. When available ground water resources become inadequate, a connection to the regional pipeline system could be made. Because of its relative remoteness, Delhi will probably have to continue looking to existing sources as its only economical source of supply for the foreseeable future, although a connection to the regional system is

possible eventually. Dunnville also is expected to continue to use (with appropriate improvement) its present supply from Lake Erie for the foreseeable future.

The OWRC has carried out long-range feasibility studies also on the possible disposal of sewage from Hagersville, Jarvis, Stelco, the Stelco industrial park and Woodhouse New Town. It appears that a system of trunk sewers carrying sewage to a treatment plant or plants on Lake Erie would be the most satisfactory solution. This system would probably never serve Cayuga, Caledonia or Dunnville but it might well eventually include Simcoe and Waterford.

The Waste Management Branch of the Department of Energy and Resources Management has prepared a scheme for a county-wide garbage disposal system in Haldimand, using three sites. This is now under consideration by the county council. The Joint Study Committee has recommended that a similar plan be prepared for Norfolk.

In view of the urban growth which will take place in the central part of the Study Area, water and sewer networks and facilities such as those described are a matter of urgency. The construction of these systems must be staged to coincide with the planning and phasing of urban and industrial growth. (Principles relating to the actual alignment of water and sewage pipelines are discussed in Subsection 8.5.5.)

Similarly, the long-range objective for garbage disposal must be an integrated system or systems which may include areas adjoining Haldimand and Norfolk. Such systems are likely to consist of a central site or sites for landfill, incineration, or other means of disposal, served by a series of local collection points. If the means of disposal is incineration, the incineration site, unless completely pollution-free, should be located within the Nanticoke industrial area (Section 6.3).

Special consideration will have to be given to the very large volumes of inorganic solid waste (slag) which will

5.3 Short-Term Housing Needs and Future of Existing Urban Communities

be produced by both Stelco and Hydro. This may assist in disposing of organic waste by means of sanitary landfill; it could perhaps also be used to fill worked-out quarries and thereby restore the sites to a usable state. Certain other suggestions are made in Subsection 7.4.2. (5).

5.2.1 Water Supply and Waste Disposal: Initial Objectives and Policies

1) Since it will probably take from three to five years for area-wide water supply and sewage disposal systems to be in operation, planning and engineering studies for systems to serve the central part of the Study Area and also to serve Woodhouse New Town should be commenced without delay. These studies should be based on the urban development concept described in Chapter 4.

2) Until new systems are built, urban growth will have to be provided with water and sewerage by existing local systems, principally at Simcoe, Port Dover, Caledonia and Cayuga, and to a more limited extent at Waterford, Jarvis and Delhi. Depending on the relative timing of the growth of industrial employment, the start of development at Woodhouse New Town, and the construction of area-wide systems, local services may have to accommodate substantially increased populations. Therefore, a careful study of each local system is required to determine what investments are necessary and how they can best be allocated to make adequate interim provision for water supply and sewerage, having in mind the eventual conversion to area-wide systems. Under present conditions of municipal finance, special assistance will probably be needed to enable municipalities to improve or expand facilities to the required capacity. Such special assistance is justifiable because large-scale economic growth, benefiting the province as a whole, will impose on a group of small municipalities a disproportionate financial burden far beyond their ability to meet.

3) The greatest care should be taken to protect all watercourses, inland lakes, and Lake Erie from increased pollution.

4) The problem of solid waste disposal, including industrial wastes, should be examined as a matter of urgency, and a comprehensive plan prepared, taking into account the prospects and plans for future urban growth. As in (2) above, the Provincial Government should be prepared to make available special financial aid.

The ability of the existing urban municipalities to accommodate the housing needs of the next ten years, based on the capacities of their local servicing systems, are outlined in Table 10. On this basis, the present "period of awakening" can be divided into two phases.

Phase 1: 1971-1975

existing servicing capacity, coupled with new servicing capacity made available by programmes already started;

Phase 2: 1976-1980

servicing capacity made available by programmes initiated during Phase 1.

It is assumed that there will be no changes in the existing road system before 1981 that would significantly alter the present time-distance pattern within the Study Area (Figure 7). At present, every town and village in Haldimand and Norfolk, with the exceptions of Dunnville, Delhi and Port Rowan, are within 30 minutes' driving time of the Nanticoke area. For the majority of workers this is considered an acceptable commuting time. Thus, employment in the Nanticoke area could in itself sustain substantial continuing population growth in seven of the ten urban municipalities. On the other hand, to reduce peak traffic concentrations in the Nanticoke area, it would be desirable to encourage the

Table 10/Urban Growth Allocation, 1971-1981, By Urban Municipalities

	1971 ¹		1976		1981	
	Housing Units	Population	Housing Units	Population	Housing Units	Population
Caledonia	920	3,000	1,400	4,660 ²	2,200	7,300
Cayuga	350	1,000	500	1,600 ²	900	3,000
Delhi	1,260	3,800	1,420	4,400	1,580	5,000 ²
Dunnville	1,820	5,400	2,270	7,200 ²	3,100	10,500
Hagersville	690	2,200 ²	690	2,200	1,000	3,500
Jarvis	250	900	500	1,800 ²	800	2,800
Port Dover	1,100	3,300	1,600	5,400	1,800	6,200 ²
Port Rowan	280	800	400	1,300	600	2,000 ²
Simcoe	3,350	10,400	4,310	15,000	6,140	21,000 ²
Waterford	780	2,500	880	2,900	1,080	3,700
Subtotal	10,800	33,300	13,970	46,460	19,200	65,000
Woodhouse New Town	0	0	0	0	1,900	6,000
Total	10,800	33,300	13,970	46,460	21,100	71,000

¹HNS estimate.

²Near, or somewhat over, Phase 1 service capacity.

TRAVEL TIMES 1970

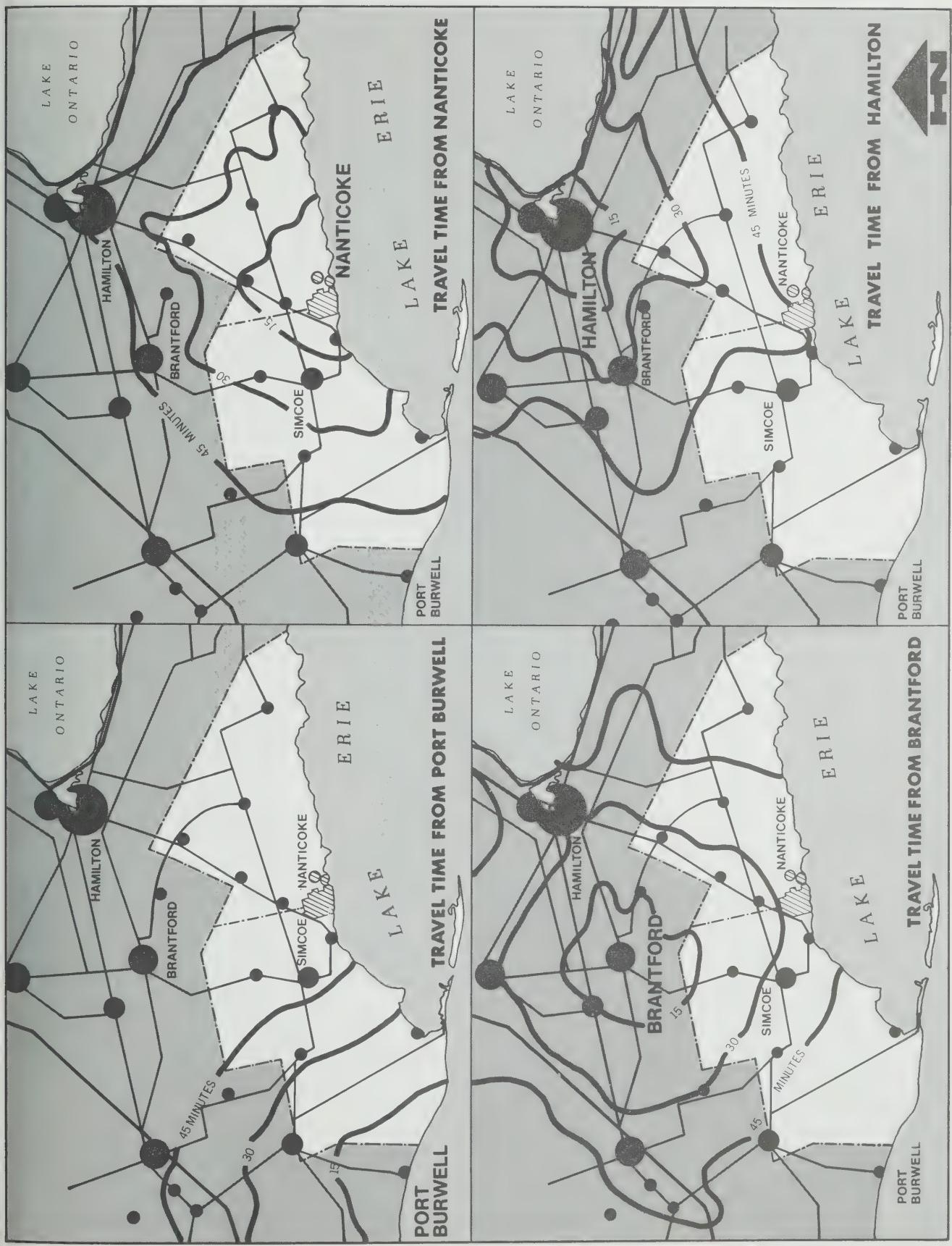


FIGURE NO-7
HALDIMAND-NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

development of local industrial parks or specialized local functions that would provide other employment opportunities.

Phase 1: 1971-1975

Hagersville will have reached its full development capacity by 1971. While development will be able to continue elsewhere, there will be a pressing need for substantial investment in piped services by that time.

By 1976 four more communities will have reached the capacity of their servicing systems, and the development of all inland communities with the exceptions of Waterford, Delhi and Simcoe will have come to a standstill if a regional servicing system is not in operation by that time.

Phase 2: 1976-1980

The need to absorb an additional urban population of some 24,000 during Phase 2 will exhaust the local servicing capacities of all urban municipalities in the Study Area, even if the development of Woodhouse New Town has begun during this period and a population of some 6,000 is reached there by 1981. Assuming that no regional servicing system is in existence by Phase 2, the municipalities best able to accommodate new residential development would be Dunnville, Port Dover and Port Rowan, since their ability to provide servicing capacity is limited only by water and sewage treatment requirements. While Dunnville is beyond convenient commuting distance from Nanticoke, it could probably rely on the expansion of its own industrial base to support any rapid increase of population. This seems unlikely for Port Rowan, which will probably have to rely mainly on its role as a resort community (Subsection 7.4.1). This is true also in a somewhat different fashion for Port Dover, whose long-term future will be closely linked with Woodhouse New Town (Subsections 4.2.2 and 7.4.1).

Three major conclusions may be drawn from the foregoing.

1) It will be imperative that a regional servicing system be in operation during the period 1976-1980.

2) The development of Woodhouse New Town also should start during this period, sufficiently early and sufficiently rapidly to allow it to reach a population of some 6,000 by 1981. The precise timing and pace of the development of the new town, as much as its physical planning, will require very thorough technical study.

3) The roles of Simcoe and Dunnville in particular in absorbing new urban development in the Study Area, especially during the latter half of the present decade, will be crucial.

Table 10 indicates a substantial variation in the rate of growth foreseen for the ten urban municipalities over the next ten years. While this is mainly accounted for by water supply and sewerage considerations, to a certain extent it reflects judgements about various other factors also. These are discussed briefly below; special comments are added concerning two unincorporated communities, the Turkey Point cottage area and the hamlet of Nanticoke. Except where otherwise indicated, the following notes are to be regarded as comments or tentative and somewhat subjective predictions, not as plans or proposals. They may, however, serve as a useful guide to local and provincial policies – for example, in relation to the Ontario

Development Corporation's incentives programme.

The figures shown in parentheses after the name of each municipality are, respectively, its present *population* and its approximate present *capacity to accommodate new dwelling units*, on the basis of registered plans of subdivision and/or land available and serviced or serviceable for development (both figures as of March 1971 and rounded off.)

Caledonia (3,000; 75 single family, 300 multiple) has effectively unlimited capacity for the disposal of treated sewage effluent but would require a regional water supply to grow beyond a population of about 4,800. With this limitation removed, it can be expected to more than double its population to about 7,300 between 1971 and 1981, serving increasingly as a dormitory town for both Hamilton and Nanticoke.

Cayuga (1,000; 150, partly single family) is in a situation similar to Caledonia's with respect to services. Without regional water, its population is limited to about 1,600; with regional water, it could perhaps double that figure by 1981. Its primary role is likely to remain that of a local service centre and residential community. This does not imply

Table 11/Urban Growth Increments, 1971-1981, By Urban Municipalities

	1971-1975		1976-1980	
	Housing Units	Population	Housing Units	Population
Caledonia	480	1,660 ¹	800	2,640
Cayuga	150	600 ¹	400	1,400
Delhi	160	600	160	600 ¹
Dunnville	450	1,800 ¹	830	3,300
Hagersville	—	— ¹	310	1,300
Jarvis	250	900 ¹	300	1,000
Port Dover	500	2,100	200	800 ¹
Port Rowan	120	500	200	700 ¹
Simcoe	960	4,600	1,830	6,000 ¹
Waterford	100	400	200	800
Subtotal	3,170	13,160	5,230	18,540
Woodhouse New Town	0	0	1,900	6,000
Total	3,170	13,160	7,130	24,540

¹Near, or somewhat over, Phase 1 service capacity.

that industrial development is undesirable in the terms discussed in Section 6.4; but in this respect Cayuga would be competing directly with Dunnville, which appears to have certain advantages over Cayuga in attracting industry.

Delhi (3,800; 110, mostly single family) will be severely restricted in its growth by its dependence on the local ground water supply and an effluent-receiving stream of limited capacity. It is in any case rather too remote to serve as a major residential community for the Nanticoke area, but will probably continue to thrive as a tobacco town for the foreseeable future. Moderate growth to about 5,000 is likely by 1981.

Dunnville (5,400; 50 single family) as already mentioned, has very high growth potential as it lacks serious servicing constraints, but to realize this potential the town will have to build up its own economic base. Since local meteorological conditions are unfavourable for the development of any industry generating air pollution, Dunnville's best prospect seems to lie in attracting the technological and "research and development" class of industry related to the basic industries of the Nanticoke and Welland areas. Dunnville's geographic position should enable it to become established over a period of time as an independent growth point, not merely an economic or dormitory satellite of either the Nanticoke or the Welland area, and yet capable of absorbing some of the growth generated by Nanticoke industry. Its pleasant character and recreational potential are important assets. Despite the town's present small capacity for new development, with an adequate economic base it could double its population to over 10,000 by 1981, a highly desirable objective in relation to the accommodation of over-all area population growth.

Hagersville (2,200; 50 single family) suffers from serious servicing and physical growth constraints. Its present development capacity is close to the effective limit. Further expansion will depend on the availability of regional services. Thereafter, growth to about 3,500 might be expected by 1981. In the

longer term the prospects are much brighter. Its relationship to the Nanticoke area and to the proposed area transportation system (Chapter 8) could provide the basis for rapid post-1981 growth if physical constraints are overcome (e.g., by the filling of disused quarries) and if transmission lines and new highways are planned so as not to restrict the expansion of the town unnecessarily.

Jarvis (1,000; 32 single family, 86 townhouses) could double its size on local services, and with regional services could approach a population of 2,800 by 1981. Prospects for long-term growth are somewhat obscure until more is known about the actual level of air pollution generated by Nanticoke industries (Chapter 6), about the detailed planning of service corridors, and about possible airport noise effects (Chapter 8). Pending clarification of these questions it would be unwise to regard Jarvis as a major long-term growth centre; its role and scale in relation to the future Woodhouse complex will also have to be resolved in detailed planning. However, the village could well provide an important service function to the Nanticoke industrial area, for example in providing hotel and restaurant accommodation.

Port Dover (3,300; 100 single family, including part of Woodhouse Township), being on the lakeshore, can be independent of regional services and in fact already has substantial excess treatment capacity. It is also very close to the Nanticoke industrial area. Its population will probably double to over 6,000 by 1981. Its future role is discussed in some detail in Chapter 7.

Port Rowan (800; 50 single family) is in a situation comparable to Port Dover's with respect to services, though at present lacking any form of sewage treatment. It is, however, too remote from Nanticoke to play a major role as a dormitory for the industrial development (Chapter 7). Its population could reach 2,000 by 1981.

Simcoe (10,400; 215 single family), already the largest town in the two

counties, can be expected to double its size to nearly 21,000 by 1981. It can reach 20,000 without relying on regional services, though this would require an increase in the capacity of existing local servicing facilities. It will in fact play a larger role than any other community in meeting housing needs between 1971 and 1981. The forecast of 21,000 by 1981 assumes that Simcoe will by then be relying on a Lake Erie-based water supply and sewerage system also serving Woodhouse New Town and probably Waterford. After 1981 Simcoe will increasingly become a component of a larger urban complex and ultimately a local community within a "city". (Subsection 4.2.2.)

Waterford (2,500; 55 single family) is constrained by stringent local servicing limitations and will have to depend on regional servicing for a population increase of about 50 per cent (to some 3,700) by 1981. During this period its role will remain primarily that of a local service centre and to a lesser degree a dormitory community, providing a physically attractive environment to compensate for a rather long commuting distance to the Nanticoke area. At present its long-term prospects are uncertain, since they will depend very much on later decisions as to the long-range urban growth strategy for the Study Area as a whole (Chapter 4).

Two unincorporated communities require special comment.

Turkey Point has some 700 dwellings, of which 200 are permanently occupied. Since the area lacks sewers altogether and has only an inadequate privately installed piped water system, there is a very real prospect of health problems arising. The community is a subject of active concern to the responsible municipal council (Township of Charlottetown) and to the Medical Officer of Health. It seems inevitable that a public water supply and sewerage service will have to be installed within the fairly near future. This in turn would provide the basis for further residential growth. Turkey Point is too far from Nanticoke to play an important role as a dormitory area, though its amenities might attract

5.4 Development Outside Urban Communities

some industrial workers despite the commuting distance. Its future function as a resort community, however, perhaps comparable with that suggested for Port Rowan (Chapter 7), could be significant, but in view of the servicing problems and the recreational potential of the site, consideration should be given to relocating much or even all of the community on higher ground to the north.

Nanticoke presents a different kind of problem, but ultimately perhaps a more serious one. The hamlet has given its name to an embryonic major industrial complex because it lies at its very centre, with Stelco's site half a mile to the west and those of the Ontario Hydro Generating Station and the future Texaco refinery about the same distance to the east. Nanticoke now has an estimated population of 150, and includes several recently built houses. It has no piped water or sewerage, but these could be provided relatively economically, and in normal circumstances the hamlet could expect modest but steady growth. Its residents for the most part consider its proper destiny to be a substantial dormitory and service community for nearby industries. Unfortunately, this cannot be considered realistic. Within the fairly near future, the hamlet will be virtually surrounded by industries generating air pollution, noise and heavy traffic. In these circumstances, it would be irresponsible of government at either the municipal or the provincial level to encourage any substantial further residential growth in this locality. On the other hand, Nanticoke must be regarded as an innocent victim of economic growth from which Ontario as a whole will benefit. To allow it to simply "wither on the vine" in a state of stagnation and declining property values, as the physical impact of industrial development begins to be apparent, would hardly be just. The most appropriate solution would appear to be to discourage any further growth, except as already permitted under municipal building and development controls. At the same time the Provincial Government should undertake to purchase, on request, any property placed on the market, on terms that would protect the

reasonable interests of the owner – perhaps at a price determined by the same procedure as applies under *The Expropriations Act*. It is reasonable to suppose that within perhaps ten years much of the property in the hamlet and its immediate vicinity would be acquired by the Province; buildings worthy of preservation (such as the old schoolhouse, now used as a community centre, which has some historic significance) might be relocated to other communities, and residential buildings could be used as temporary rental housing for industrial workers. Eventually, the remaining privately owned properties would be expropriated and the assembled land sold or leased for industrial development or such other use as might be appropriate at the time.

While discussion so far has dealt with the growth of urban communities, development in Haldimand-Norfolk during the next ten years will not be confined to urban areas. It is estimated that some 5,000 people will in fact be added to the rural non-farm population. They will find accommodation in rural areas, small settlements, or erstwhile summer cottages. New dwellings outside urban areas will be accounted for either by infilling of rural hamlets, or by the erection of "country homes". The latter will be carved from a farm holding mainly by the device of the "severance". During the period January 1967 to June 1970, approximately 1,000 new dwellings were built in the 18 townships, accounting for about half the total residential construction in the two counties (of these, seasonal dwellings or cottages accounted for about six per cent). This reflects the present settlement pattern of an area in which some 40 per cent of the population is urban, 29 per cent rural, and 31 per cent rural non-farm.

The issue of severances demands special attention. The rationale of the severance is to enable a farmer to allow (typically) his son to build his own house on the family land. In practice this intent is commonly subverted. The severance is widely used to enable farmers to sell part of their land to anyone seeking to build a rural home. Under existing municipal financing arrangements, and in the absence of any positive land use policy, this can, and frequently does, lead to poor planning, servicing problems, and financial difficulties for rural townships (a house on a ten-acre lot may be able to dispense with sewers and piped water – though not necessarily – but the costs of most other services will be at least as high as those for a typical urban house). In principle, therefore, the practice of carving haphazard parcels out of farms ought to be severely discouraged pending a thorough review of the whole situation, and the original purpose of the severance strictly enforced, perhaps by some form of restriction on title.

There is, however, another side to the argument. In the particular circumstances of Haldimand and Norfolk,

severances will help to provide a certain amount of elbow-room in what will certainly be, over the next few years, a very tight housing market. In the second place, there will always be some people who genuinely wish to have a "country home" on a few acres of land. They should not be denied the opportunity to do so as long as they are prepared to pay the price – in terms of public costs as well as those of the private market. Finally, there are parts of the two counties, notably the proposed "green belt" areas (Chapter 7), where the "country estate" is in principle entirely appropriate for general land use policy. Here it provides a means of retaining the essentially rural or "green" character of the landscape – in some cases, of land which is not economically productive for farming or which should be kept treed for reasons of conservation or aesthetics.

Obviously, the question of rural non-farm dwellings is not a simple one. It is therefore recommended that for the present the creation of severances be stringently controlled pending a thorough study on which to base a policy covering the locational, legal, financial and servicing aspects of rural non-farm and "country estate" development. It is further recommended that such a study be undertaken as a matter of urgency.

An important characteristic of the housing picture in Haldimand-Norfolk is the high proportion of seasonal dwellings (cottages). Probably half the 18 townships have more seasonal than year-round dwellings, but the need to use the word "probably" demonstrates one of the chief problems in this area: paucity of accurate data. As far as can be judged from the information available from the Dominion Bureau of Statistics, Ontario Hydro, and other sources, the total number of cottages in the two counties is about 4,800, mainly in the Townships of South Cayuga, Dunn, Rainham, Sherbrooke, Walpole, Charlotteville, North and South Walsingham, and Woodhouse, and the Town of Port Dover. There are several sizable "cottage communities" – for example, at the west end of Long Point in South

Walsingham; at Turkey Point and Normandale in Charlotteville; Peacock Point and Woodlawn in Walpole; Hoover Point, Featherstone Point and Evans Point in Rainham; and Mohawk Bay in Dunn.

Since many of these "communities" are within reasonable commuting time of Nanticoke, many cottages are occupied all year round, offering a ready response to demand in a tight market. The total number of dwellings so occupied is unknown. Most of them are in the Townships of Rainham, Walpole, Woodhouse and Charlotteville and the Town of Port Dover.

While most of these seasonal dwellings are adequate in construction and sanitary facilities for summer or weekend use, few are suitable for year-round occupancy. Almost without exception the concentrations referred to above are considered by the Medical Officer of Health not to meet satisfactory sanitary standards, while few buildings have safe means of heating or adequate insulation for winter use. Joint action is being taken by the MOH and the Ontario Water Resources Commission to deal with the worst cases of insanitary conditions. The municipalities concerned are aware of the problems but – cottages being an important source of revenue – are on the whole reluctant to act.

One solution lies in bringing cottages up to adequate physical and health standards for year-round use. But this, while adding to the total stock of permanent housing, would also add very greatly to the costs of fire and police protection, garbage collection, school buses and other services. Furthermore, such investments would tend to anchor the cottages more firmly in areas from which they may before long be removed altogether (Chapter 7), and greatly increase the costs of such removal. On the other hand it would be inadvisable to initiate a vigorous campaign to eliminate year-round cottage occupancy until a reserve of alternative housing has been created for their present occupants, such as retired people and the families of construction workers. This is the most

desirable and ultimately the only effective solution to the problem.

On balance, a policy of "holding the line" again seems best at present: i.e., stabilization of year-round cottage occupancy more or less at its present level; prevention of any further cottage development (other than minor infilling) pending the establishment of firm and positive new policies for this form of development, as recommended in Chapter 7; and initiation of a thorough survey of all existing seasonal dwellings to determine numbers, location, type and condition of construction, sanitary condition and occupancy.¹ Meanwhile, a heightened public and municipal awareness of the implications of the conversion of summer cottages to year-round occupancy is badly needed.

Finally, to achieve a sound urban growth pattern and avoid further haphazard "rurban" sprawl in farming and other rural areas, it is essential that no important new community and service facilities and industries be established where they will tend to stimulate this type of development. While rural residents need, and are entitled to, certain types of everyday service (convenience stores, elementary schools, etc.) fairly close at hand, industries and major facilities (shopping centres and high schools, etc.) should be sited in existing communities. This will both strengthen these communities as service centres for the general benefit of the public, and avoid creating new focal points for clusters of spotty development. Locational decisions concerning all important public and private institutions and services must respect over-all development policies if these policies are to be fully effective.

¹Studies by the HNS and the Joint Study Committee are already in progress.

5.5 The Provision of Housing

So far, this section of the Report has dealt with the location of housing construction, and the availability of land for this purpose. Ensuring that an adequate supply of new housing will actually be maintained is another subject which is given detailed examination in a special report – *Haldimand-Norfolk Housing Needs*, prepared for the Ontario Housing Corporation by Paterson Planning and Research Ltd. at the request of the Haldimand-Norfolk Study. Discussion in this Report will therefore be confined to some general observations, based mainly on the Paterson report.

In effect, Haldimand-Norfolk will have about five years to gear up for a new scale of housing construction, since the annual rate of new housing starts will not need to increase drastically until about 1976 (Table 7). But the required rate of housing construction will be almost double over the following five years and will continue to increase rapidly thereafter. It seems unlikely that the local building industry will be able to meet this demand.

To deal with the new circumstances, the first step should probably be a series of discussions involving the National House Builders Association, the Ontario Housing Corporation, Central Mortgage and Housing Corporation and the Haldimand-Norfolk Study (or its successor planning agency – Chapter 9). This group could consider means of both organizing the building industry to meet the demands which will be placed upon it (taking into account the competition of industrial development for construction workers), and assuring a continuing adequate flow of mortgage financing.

Specific measures which should be considered are OHC building under the HOME programme, and the creation of mobile home parks. Suitable locations for the early initiation of such programmes would be Simcoe and Cayuga, both of which have serviced land readily available.

Another measure, discussed further in Section 9.4, is the establishment of a housing information service. This

agency would maintain up-to-date information both on anticipated short-term housing needs and on the current availability of housing and of serviced or serviceable land for housing. As a service both to the developer and the consumer, it would be linked to the "monitoring" system proposed in Section 9.4 for the planning and development process as a whole. By the late 1970's the service would probably have to be supplemented by a full-scale review of the housing situation and future needs in the two counties.

5.6 Housing: Initial Objectives and Policies

- 1) The new Woodhouse townsite must accommodate about 6,000 people by 1981. The planning of both the physical layout and of the development process (both of which will require major technical efforts) should, therefore, be completed by about 1975 (Subsection 4.2.3 (8)).
- 2) Planning and construction of regional servicing systems must be completed in time for the water supply system to be functioning by the late 1970's.
- 3) The future of Turkey Point as a residential and/or resort community will require special examination as a basis for the planning of local services.
- 4) Substantial growth of the hamlet of Nanticoke should not be encouraged. The Provincial Government should undertake to purchase, on request, any property in the hamlet and its immediate vicinity at a fair price. Houses so acquired should be used as rental accommodation on a fairly short-term basis; buildings which merit preservation should be relocated; and ultimately the entire site should be assembled for industrial or other non-residential purposes.
- 5) The use of the severance device as a general method of providing housing sites should be firmly controlled, but there is an urgent need for a comprehensive study as a basis for a positive policy and plan for rural homes and "country estates".
- 6) A detailed study of the use and condition of seasonal dwellings is also required. Pending preparation of a plan for seasonal residential land use, substantial new cottage development should not be permitted and conversion of existing cottages for year-round occupancy should be discouraged. On the other hand, in the immediate future, stringent measures to eliminate such occupancy where it already exists are not recommended except where a clear threat to public health and safety is involved. This should be regarded strictly as an emergency short-term policy.

7) New major community and service facilities and industries capable of generating significant residential development should be located in existing urban communities, not in rural areas.

8) There should be early discussions among the appropriate home financing, development and planning agencies to prepare industrial and financing plans in anticipation of the need for a rapid increase in the rate of housing construction after 1975.

9) HOME programmes and the provision of mobile home parks should be undertaken in the near future to provide early relief to the already tight housing market.

10) A special service should be initiated both to forecast short-term housing needs and to maintain up-to-date information on the supply of housing and land for residential development (Section 9.4).

6.1 Industrial Development Trends

The last few years have witnessed what may be the first stage in the economic transformation of the north shore of Lake Erie: the advent of the "megascare" industry (Professor E. G. Pleva's term). The first of these industries was the Ford of Canada assembly plant at Talbotville, south of London. Then came the announcement of Stelco's Lake Erie Works, and soon afterwards, the news of Dominion Foundries and Steel Company's acquisition of a site for a new steel plant at Port Burwell.

It is not merely fortuitous that much new industrial development is "megascare", or that it is attracted to the relatively undeveloped parts of southwestern Ontario. In several industries, new technology is bringing about a much increased scale of operations. Sooner or later firms are compelled to adopt the new technology to maintain their competitive positions in the market. The larger scale in turn leads to a need for large sites, which must be within reach of the particular industry's market area but which are usually available only away from presently developed areas.

The coming decades will see a steadily growing need for large industrial tracts. New planning techniques will be needed to cope with the far-reaching implications of development on the Stelco scale. Zoning as it operates in Ontario today is unlikely to be an adequate tool to control development trends of this magnitude. New devices will probably be needed if large industries are not to dictate regional patterns of urban development.

Other important industries besides Stelco have been attracted to the Lake Erie shore in Haldimand and Norfolk: Ontario Hydro's Nanticoke Generating Station and the proposed Texaco refinery, both at Nanticoke, and the Electric Reduction Company of Canada (ERCO) at Port Maitland. While these are not megascare industries, they are unquestionably significant in terms of their environmental impact and as further evidence of the attractiveness of this region to industries with certain kinds of location requirement. Principally, these are: large sites, access to

the Great Lakes system (for transportation or industrial processes), coupled with good land transportation and reasonable proximity to the major market areas of Toronto, central southwestern Ontario, and the northeastern United States.

Given these conditions, the unimpeded operation of economic forces would probably bring about continued industrial growth, some of it "megascare", in the Haldimand-Norfolk area. It is not within the scope of the Haldimand-Norfolk Study to determine whether or not such industrial growth is desirable; this is a basic policy decision which can be made only in a provincial (and possibly even national) context. It is, however, a decision which will have the greatest possible effect on the future of Haldimand-Norfolk, since it will determine how far the area will change from its present character to an urbanized segment of the Great Lakes industrial complex. But neither the continuation of major industrial growth, nor the imposition of a ceiling on such growth (assuming this to be feasible), is in itself to be regarded as necessarily either good or bad for Haldimand-Norfolk. Either course would probably have both desirable and undesirable consequences for the area and its people.

6.2 The Effects of Industrial Growth

"Major" industrial development has two quite distinct kinds of impact on an area. ("Minor" industrial development is discussed in Section 6.4.) "High growth impact" (HG) industries employ many workers and thus have a large effect on population and transportation (these are the true "megascare" industries); while "high environmental impact" (HE) industries have a large effect on their surroundings, for example by generating air pollution, noise or heavy traffic. (The classification is a crude one, since there are many variations and no clear-cut dividing lines; but it will serve for the purpose of discussion.) An HG industry may also be an HE industry – Stelco is an obvious example – but not necessarily. The Ford plant at Talbotville is HG but not HE; conversely, Ontario Hydro's Nanticoke Generating Station is HE but not HG, since its operating staff will number only about 300.

HG and HE industries are frequently lumped together under the term "heavy" industry, yet the distinction between them is important. The location of an HG industry may have a substantial impact on a whole region; and it is consequently with regard to these industries that basic policy decisions concerning industrial growth in Haldimand-Norfolk are crucial. On the other hand, the impact of an HE industry is often localized, but is extremely important at that level. Thus an industrial land use policy for Haldimand-Norfolk must for the present serve two distinct purposes. One is the siting of HE industries where their environmental impact will be minimized. The other is in effect to impose a ceiling on high growth impact industrial development in the Study Area pending the formulation of Provincial policy. The former purpose is thus concerned mainly with controlling *location*, the latter with limiting *land availability*.

Specific policies relating to both HG and HE industries will be discussed in the next section.

6.3 Major Manufacturing: Initial Objectives and Policies

1) The Nanticoke industrial area (embracing the Stelco, Hydro, and Texaco sites) is compatible with the objectives of this plan. It is well related to the regional transportation system and separated from all but very small existing communities and from key natural and recreational areas, with the important exception of the beaches and cottages along the Lake Erie shoreline. To maintain this separation, any future expansion should be generally to the east rather than the west or north, and the location of either HG or HE industries in other parts of the Study Area should not be contemplated unless and until clearly appropriate in the context of Provincial policies. Even then, HE development almost anywhere else in Haldimand-Norfolk would require very careful examination in terms of environmental impact.

It would, in fact, be highly desirable to exclude all new industries in the HG or "megascaling" category, other than Stelco, until their impact can be assessed in relation to Provincial regional development policies. If further industries in this category are deemed acceptable, sites should initially be made available only in the Nanticoke area itself.

There are obvious potential advantages to concentrating varied industrial uses in the Nanticoke area: the private sector may enjoy greater "external economies" and the public may derive substantial savings by better use of public facilities (piped services) or by securing services which would otherwise be uneconomic (public transportation). Eventually, major industrial sites may be required in other parts of the Study Area, but sufficient land is available in the Nanticoke area to meet all the needs now foreseeable. Should a site for an HG industry be sought in another part of the Study Area, the decision should be based on the collective policies recommended in this Report.

Industries in the HE category are acceptable in the Nanticoke area (subject to the air pollution controls discussed below), but only east of Stelco. Guidelines to classify industries according to their growth impact or their environmental impact are very general

at the moment and will have to be translated into specific performance standards. Based on the general guidelines now available, the proposed major manufacturing (HG and HE) industrial area falls into four categories based on characteristics and timing:

- a) HG initial development permissible;
- b) HE initial development permissible;
- c) HG future expansion;
- d) HE future expansion;

The Nanticoke industrial area can be divided into seven industrial development sites according to these categories, as follows (see also Figure 8):

Industrial Development Sites	Industrial development categories			
	Initial Development		Future Expansion	
	HG	HE	HG	HE
1 Stelco steel mill site	yes	yes	yes	yes
2 Stelco industrial park ¹	no	no	yes	no
3 Ontario Hydro site	no	yes	no	yes
4 Texaco site	no	yes	no	yes
5 East of industrial park	no	no	yes	no
6 Between Stelco plant and Texaco site (north end)	no	yes	yes	yes
7 East of Texaco site	no	no	yes	yes

¹It is recommended in Section 6.4 that the Stelco industrial park should also be used for minor manufacturing.

These limits may appear unduly restrictive at first glance. But in fact sites 1, 3, 4 and 6, where major industrial development would be permissible initially, comprise altogether about 7,000 acres with a probable eventual employment of some 46,000 workers. All seven sites together amount to about 11,000 acres (about 60 per cent of the area of developed industrial land in the Metropolitan Toronto Planning Area in 1968). This area could employ a total of 95,000 workers or more when fully developed at present day employment densities in similar industries.

Once industrial zoning is enacted, effective public control is lost, and the land can be developed at any time. It is not primarily the industry as such, but rather its effects in terms of population and urban growth, that are of prime concern here. The great fault of indus-

trial "overzoning" is that it creates a state of uncertainty in the region as a whole by signing a blank cheque for development.

Therefore, it is recommended that:

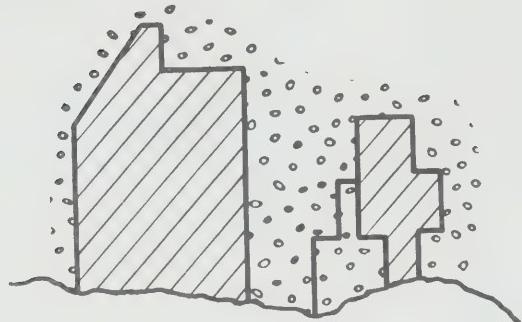
- a) Present industrial zoning not be increased (except to include site 3) until specific development proposals are advanced;
- b) Sites 3 and 6 be added to present official plan industrial designation;
- c) Sites 5 and 7 to be designated as industrial reserves for official plan purposes.

2) The Air Management Branch of the Department of Energy and Resources Management has indicated that it would be unwise to allow new urban residential development within three miles of the boundary of the Nanticoke industrial area.

Three points need to be stressed about this recommendation. First, it is a precautionary measure intended to apply until the actual effects of industry on air quality can be measured. Second, it is not intended as a total development "freeze", nor does it mean that air pollution will be intolerable, or even particularly offensive, anywhere within the three-mile belt. Simply, it is unnecessary, therefore unwise, to permit substantial permanent residential growth in an area which could be significantly affected by pollution. Third, the three-mile limit is based on the level of emis-

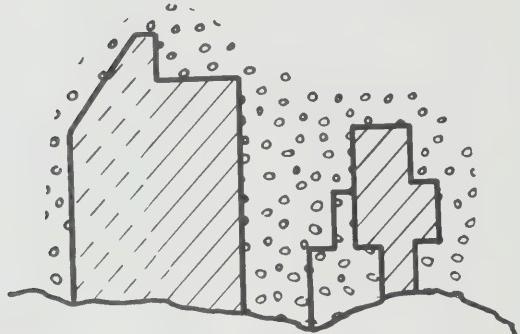
PRESENT DESIGNATION OF LAND IN THE NANTICOKE AREA

OFFICIAL PLANS



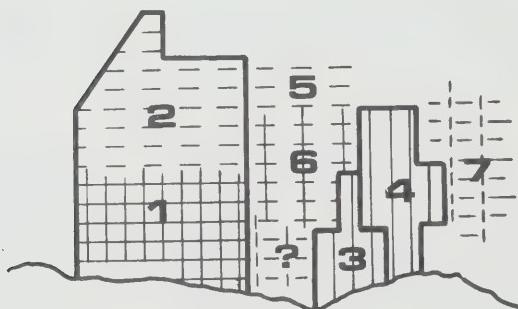
INDUSTRIAL
 RURAL

ZONING BY-LAWS



INDUSTRIAL
 INDUSTRIAL-(PENDING)
 AGRICULTURAL

INDUSTRIAL DEVELOPMENT CATEGORIES



HG PERMISSIBLE
 HE PERMISSIBLE
 HG FUTURE
 HE FUTURE



FIG. NO-8
HALDIMAND - NORFOLK STUDY

sions now permitted by the regulations made under *The Environmental Protection Act* (formerly *The Air Pollution Control Act*).

It is therefore recommended that until experience or new policies justify a change, substantial new residential development be prohibited within three miles of the perimeter of the Stelco plant site, and of the industrial and industrial reserve areas to the east (Map 1). While it may include "light" or non-polluting industry, much of this buffer zone will probably remain in open space uses – principally agriculture – for the foreseeable future.

The buffer zone should be enforced by appropriate official plan designation and zoning. At the same time, a study should be undertaken to consider the implications of this measure for the owners of the affected lands, to determine suitable measures, and if necessary to recommend special compensatory or other measures. Such special policies may be needed should land use control measures cause undue hardship to landowners. "Undue hardship", however, should be interpreted only to mean an actual worsening of the circumstances of the owner.

The validity of this recommendation assumes the continuation and strict enforcement of the regulations under *The Environmental Protection Act*.¹ Any change in these standards would require a reconsideration of the three-mile limit.

The effect of the present regulation is to impose a limit on air pollution by restricting the over-all level of emission in a particular area. This in itself may limit further industrial development in the Nanticoke area to plants which generate little or no air pollution. But in any case, the controls should not be relaxed, nor should HE industries be permitted to establish in other parts of the Sudsy area.

One of the main problems associated with industrial development in Sudsy-Norfolk is the competition between industrial and recreational use

of the lakeshore. The greatest single attraction for industries in the Nanticoke area is the lake, both as a source of water and as a means of transportation. The conflict is not as severe as it first appears, however, since the extent of shoreline required by the industries for operating purposes is quite limited. The Texaco refinery site, for example, includes less than a quarter of a mile of shoreline, and Stelco's shoreline ownership amounts to about one and one-third miles. Cottage and recreational use of much of the lakeshore fronting industrial sites is therefore quite feasible, given appropriate measures to avoid conflict.

The following recommendations are made for use of the lakeshore:

- a) In general, industrial sites should not be permitted to extend south to the lake to the east of the Texaco site or to the west of the present limits of the Stelco site.
- b) If necessary, the previous recommendation may be relaxed to allow narrow access corridors to docks, water intakes, etc., serving inland industries. If at all possible, however, this type of lake access should be kept within the limits defined in (a), either by joint use of existing facilities or by the construction of new facilities south of Nanticoke. Planning and coordination of lake-related services to the industrial area is imperative.
- c) All lands lying along the lakeshore between the limits defined in (a) not now owned by Stelco, Ontario Hydro, Texaco or the OWRC, should be acquired by the Government as they come on the market, either for public recreation or for the purposes described in (b), as appropriate.
- d) All industries should be required to provide sufficient open space on their sites, together with suitable buildings or screen planting, to protect adjacent farm, cottage and recreation areas from visual or other intrusion by industrial uses. It would in fact be desirable to undertake a study to prepare comprehensive recommendations respecting screen planting, landscaping and buffer zones for the industrial areas as a whole.

4) The adequacy of present legal means of controlling the locations and scale of industrial development should be very thoroughly examined. If necessary (as seems likely), new legislation should be enacted to allow the development of large-scale industries to be effectively controlled.

5) The Community Planning Branch of the Department of Municipal Affairs should review the official plans, zoning by-laws and land division controls of Walpole Township and adjacent municipalities to ensure that they are consistent with the policies recommended in this section.

6.4 Minor Manufacturing: Initial Objectives and Policies

Minor manufacturing industries are defined for the purposes of this Report as those which do not have a significant impact either on the growth rate or growth pattern of the Study Area as a whole, or on their immediate environment.

Minor manufacturing should generally be located either within or adjacent to urban municipalities, or in major industrial areas, such as the Stelco industrial park. As a rule of thumb, no more than 50 per cent of the total labour force (or an equivalent of about 20 per cent of the total population) should be employed in a minor manufacturing establishment in the smaller communities up to 2,000 population. A limit of about 500 permanent employees is suggested for the larger communities. As in the case of major industry, these guidelines are very general, lacking the backing of sufficient research, and will need refinement into more specific standards.

As a general policy, minor manufacturing industries are to be encouraged in order to diversify employment opportunities and to help offset the dominance of Stelco as an employer. They should be sited preferably in or adjacent to urban centres which can service them adequately, but with attention to their relationship to residential areas, traffic patterns, etc. The Stelco industrial park would be an appropriate location for minor manufacturing industries directly related to Stelco, either as suppliers or as users of steel products. Amounting to some 3,000 acres, the park provides sufficient land to accommodate the demand for such sites for the foreseeable future, unless a large part of the area is taken up by one or more big industries. Phasing of development will therefore be required in the detailed planning.

With two exceptions, no specific recommendations are made concerning sites for minor manufacturing industries in urban communities. This is a matter more properly dealt with in the preparation of local official plans. The exceptions are Woodhouse New Town itself, and Hagersville. The local industrial area of the former should be immedi-

ately west of the Black Creek green belt, for reasons of transportation and proximity to the Nanticoke industrial area, and to make use of that part of the site within the air pollution buffer zone. In the case of Hagersville, a new industrial area would be best located west or southwest of the town, related to the proposed transportation system (Map 3).

The creation of well planned and serviced industrial estates for the larger communities is almost essential, considering contemporary industrial needs and the competition for industrial development. But the establishment of such estates should be preceded in each case by a thorough study to ensure that the investment can be justified and that the estate is designed for the needs of the types of industry likely to be attracted. Otherwise, the only recommendation relating to industrial development in or near urban communities, present or future, is that specific and detailed performance standards should be adopted throughout the Study Area to govern hazardous or offensive conditions and to prevent pollution of both air and water by inappropriate or inadequately regulated industrial uses.

It is also recommended that industrial development of any kind, other than extractive industries (next section), be discouraged in rural areas (though not absolutely prohibited), to prevent servicing problems, scattered, uneconomic development, and scenic damage.

6.5 Extractive Industry: Initial Objectives and Policies

From the northern part of Walpole Township west of Hagersville to Dunn Township south of Dunnville (Map 1), runs a belt of construction minerals (stone, gravel and gypsum) which supports the only substantial extractive industries in the Study Area other than sand and gravel extraction in Norfolk, and natural gas.

Two of these industries, Domtar at Caledonia and Canadian Gypsum at Hagersville, each with an employment of about 200, are among the largest employers in Haldimand County. This resource is important not only locally but nationally. In recent years 90 per cent of Canada's gypsum, and all of Ontario's, has been produced in Haldimand. Apart from its present value to the economy of the county, the ready availability of construction materials will be of great importance in meeting the future demands of the construction industry in the Study Area.

Extractive industries are tied to the areas where minerals can economically be mined; their sites are further restricted by high transportation costs. On the other hand, the extraction and processing of construction materials is one of the least desirable industries from an environmental standpoint. It creates air pollution, noise and heavy truck traffic, and despoils the natural landscape. Detailed examination will be needed to determine the most satisfactory solution to this problem in each case, but in general the establishment of new extractive industries in or near present and prospective urban areas, and in areas of special landscape value, should be prevented. Mineral extraction "reserves", however, should be established for future development.

Several of the existing extractive industries are badly located with respect to urban areas. In particular, quarries are a serious constraint on the growth of Hagersville. It is recommended that the quarry west of Highway 6 be restricted from further eastward expansion.

No further recommendations can be made without a detailed study of existing operations. It is recommended,

therefore, that a study be carried out at a fairly early stage in the continuing planning process.

The problems posed by extractive industries in general are dealt with very fully in the *Report of The Mineral Resources Committee to the Minister of Mines* (September 1969) and the Supplement to the Report, and cannot be better presented than in the words of these documents.

"There is a critical need for planned development of mineral resources close to urban areas to ensure an adequate supply of essential construction materials for the growth of the community. . . . It is prudent to preserve and ensure the utilization of those valuable mineral resources that may be present in areas to be zoned. The aim of the planner should be a multiple or sequential use of the land. Sand, gravel or stone resources should be exploited first, where possible, and the land later rehabilitated for building or other purposes."²

On the location of extractive industries, the Committee's report had this to say:

"Mineral Resource Zoning"

"The time has now come to institute a Provincial policy of Mineral Resource Zoning, especially in rural municipalities close to urban areas which are large consumers of mineral products, particularly sand, gravel and crushed stone.

"To properly zone a township so that essential mineral resources may be developed and utilized, there are four basic requirements:

"**1)** a bedrock geology map indicating the presence and disposition of bedrock outcrops of shale, sandstone, limestone and dolomite or other useful minerals.

"**2)** a surficial geology map showing the disposition of deposits of clay, till, sand and gravel, etc.

"**3)** a drift thickness map showing where drift is thin enough to strip for quarrying of shale, limestone, etc.

"**4)** an industrial mineral resource survey outlining the location of economic industrial mineral deposits and giving data on physical and chemical properties of these materials as required for commercial development.

"These surveys form the basis for outlining Mineral Resource Zones in which the operation of pits and quarries would be permitted."³

The Supplement added:

"The Committee considered that it was vital to provide for the location of future pits and quarry areas within the context of an overall municipal planning program rather than on an ad hoc basis . . . the formulation of the basic policy as to where pits and quarries are to be located should be initiated at the municipal level. The development of this policy should be part of a total municipal planning program which should be expressed in an official plan approved by the Minister of Municipal Affairs.

"This premise inevitably means that the mining of some known mineral deposits logically cannot be permitted. An operation, for example, might unduly interfere with the existing land use pattern in a particular area or a rehabilitated site might not be compatible with the ultimate use of the land as envisaged in the official plan."⁴

On the control of extractive operations and restoration and rehabilitation of sites, the Committee's report stated:

"Most forms of land development are amenable to control and regulation by means of preliminary site planning. The working of mineral resources is no exception. The submission of site plans, showing existing and final grades, property lines, adjacent land uses, forested and water areas, etc., and including development and rehabilitation proposals has, therefore, been recommended as a prerequisite of an application for a permit to carry on pit or quarry operations . . . A most important objective of this whole exercise is to minimize the ugly scarring of the Ontario countryside by ensuring that rehabilitation of mineral workings is properly and progressively carried out."⁵

published by the Ontario Department of Mines as *A Guide to Site Development and Rehabilitation of Pits and Quarries* (Industrial Mineral Report 33, 1970).

The recommendations of the Committee have been largely included in *The Pits and Quarries Control Act*, 1971, and were subsequently applied to the Niagara Escarpment (O. Reg. 545/71). In brief, the regulations require the rehabilitation of sites; screening of operations by trees or landscaped earth berms; and fencing. They also regulate the location and use of buildings, the location of excavations and of stockpiles of material and scrap, drainage, and the use of explosives.

It is recommended that the same regulations be applied in the Haldimand-Norfolk area, in particular to the geographical townships of Townsend, Walpole, Oneida, Rainham, North and South Cayuga, and Dunn.

The *Report of The Mineral Resources Committee* recommended amendments to Provincial legislation to enable municipalities to exercise adequate control over the location of pits and quarries, to require the approval of site plans by the Chief Engineer of Mines, and to provide for tree screening of operations, setback of buildings, stockpiling of topsoil, site rehabilitation and other measures to mitigate the effects of mining and quarrying operations on their surroundings. The *Report* also drew attention to a rehabilitation manual by Professor A. M. Bauer, subsequently

²*Report of The Mineral Resources Committee to the Minister of Mines*, September, 1969, pp. 4-5.

³*Ibid.*, pp. 7-8.

⁴*Report of The Mineral Resources Committee*, Supplement 1970, p. 2.

⁵*Report of The Mineral Resources Committee*, pp. 10-11.

7.1 Open Land

Although the emphasis so far has been on urban and industrial land use, by far the greater part of Haldimand-Norfolk will not be needed for such purposes for the foreseeable future (Section 3.4). The land area of the two counties is 718,000 acres. At the highest reasonable estimate, urban and industrial land uses (not open in character) will affect less than one-tenth of this by the end of the century. Some of the remainder will be used for transportation and utilities, and some for recreation, but most of the land will remain in farming. The wise use of all of this open land is crucial and is to be considered as a vital counterpart to policies established for urban and industrial land.

The three key considerations which form the central theme of this section stem from this concern.

1) "Green" land cannot be regarded simply as what is left over from other uses; policies for its effective management are needed as much as they are for urbanization and industrialization.

2) Urban growth will have a substantial indirect impact on land use in terms of the need for outdoor recreation not only for the future town-dwellers of Haldimand-Norfolk but also for the residents of the cities of southwestern Ontario, upstate New York and even further afield. The Study Area includes outstanding and already popular natural recreation resources, including features of very great interest to the naturalist and the scientist; but in general these resources are fragile and would be destroyed by intensive use.

3) Despite the limited land demands of industry and urban development, conflicts will inevitably arise between those demands and the requirements of ecology, conservation, recreation, farming and aesthetics. The competition of

industry and recreation for the lakeshore has already been referred to in Section 6.3.

Planning for "open" land use is therefore vital, not only to reconcile conflicting demands, but to establish sound policies for the protection and constructive use of the hundreds of square miles of Haldimand-Norfolk that will remain in open use for the foreseeable future.

7.1.1. Open Lands: Long-Range Objectives and Policies

Certain general policies, principles and objectives relating to the natural environment should be accepted as fundamental to all future planning in the Study Area.

1) The main objective is to maintain a balanced ecosystem or "environmental homeostasis" – the stable relationship of living organisms to each other and to their physical base. This means wise management of the whole natural environment – not necessarily adamant preservation of every animal, fish and tree, but the careful integration of wildlife conservation, forestry, water management, agriculture, recreational uses and urban and industrial development so that the essential balance of nature is maintained. To accomplish this, all human activities which affect the land must in effect be planned so that they respect the natural environment. Where they alter it, as must happen, the change should be compensated for if necessary.

2) The Study Area is unusually rich in natural and man-made features of great, in some cases unique, value from an ecological, recreational, historic or aesthetic standpoint. The Lake Erie beaches, Long Point, the lower Grand River and the hamlet of Vittoria are only some examples. These should be permanently preserved, and in some cases improved and enhanced.

3) Permanent green belts should be retained between major urban areas. Such green belts are not to be considered purely recreation areas; they may include farmland, cottage and "country estate" areas (subject to appropriate

planning policies, Section 5.4), small communities, forestry, conservation areas, and a variety of other uses. Their purpose would be to prevent the continuous spread of large cities, to enable city-dwellers to gain ready access to open countryside and a variety of low-intensity outdoor recreation, and to provide sites for suitable institutional and other uses requiring large areas of land.

The Grand River is the natural core of a green belt separating the Woodhouse-Nanticoke area from Hamilton and the St. Catharines-Niagara Falls-Welland-Port Colborne complex.

A more extensive permanent green belt is recommended west of Highway 24, comprising the wedge formed by the Big Creek and Otter Creek valleys (Map 2). (It is suggested that consideration might be given to extending this northward as a permanent green belt between the Kitchener-Waterloo-Galt-Guelph complex and the rapidly developing "London-centred region".)

The policy recommended for these two areas is similar to that proposed for "Zone 2" in *Design for Development: Toronto-Centred Region*: "... to retain (them) to the maximum degree in recreational, agricultural and other open space uses".² Moderate expansion of existing communities as well as planned cottage and "country estate" areas, compatible institutions, recreation, agriculture and forestry, and any other use consistent with a generally open and "green" character would be acceptable, but not large-scale urban or industrial development.

Intrusive linear services such as highways and transmission lines, which will have to pass through these areas, should be carefully planned and designed to disrupt their character as little as possible.

4) Competition for the use of the lakeshore is already becoming acute; one need refer only to industry, cottages and public recreation. Careful planning and integration of lake-related uses is crucial

¹This section of the Report owes a great deal to the *Haldimand-Norfolk Environmental Appraisal*. The assistance of two briefs, one prepared for the Joint Study Committee by the Norfolk Field Naturalists and the other for the Study Director by the Ontario Federation of Naturalists, is also gratefully acknowledged.

²*Design for Development. The Toronto-Centred Region*, Department of Treasury and Economics, May, 1970, p. 20.

so that conflicting demands can be evaluated and as far as possible reconciled to serve the greatest possible overall benefit (Section 6.3).

In planning for the lakeshore, special consideration will have to be given to the problem of erosion. Total prevention of erosion probably would not be economically feasible and would in any case be disastrous to the maintenance of Long Point and the lake beaches (Subsection 7.1.2). One of the main elements in a lakeshore study therefore would have to be consideration of how to minimize erosion damage without bringing about even more undesirable consequences.

7.1.2 Open Land: Initial Objectives and Policies

1) The Government should make a clear and unequivocal statement that its policy is to maintain the character of the agricultural and other "green" areas of Haldimand-Norfolk, except as otherwise called for by plans approved by the Government. Such a policy statement would be a guide to the programme and activities of Government departments and agencies and also to the municipalities. It would inhibit land speculation, thus helping both to stabilize land prices and assessment and to guide desirable private investment.

2) A similar policy statement should be made concerning the Government's recognition of areas and features of special natural, recreational or aesthetic importance. Such a statement should express the Government's intention to give special consideration to them and where appropriate preserve them. The list should include at a minimum:

All Lake Erie beaches with significant recreational potential;

Long Point and other Lake Erie marshlands;

The Grand River and its valley, including McKenzie, Boston and Rogers Creeks;

Big Creek, Otter Creek, their tributaries and valleys;

Waterford Ponds;

Nanticoke and Sandusky Creeks;

The Lynn River and Black Creek and their valleys;

Oswego Creek and its watershed; The sand hills near Clear Creek; All other areas identified in the Chanasyk report as "strategic natural areas".

3) The present position of all these areas and features should be reviewed carefully. Where necessary, special interim measures should be adopted to ensure that Government policy is carried out and that there is adequate protection against, for example, urban development, mineral extraction and inadequately planned or designed service rights-of-way. Filling of marshes and other natural areas for any purpose should be prohibited.

It should be noted that the policy recommended may have ramifications beyond the Study Area; for example, the maintenance of Long Point requires a continuing supply of sand from erosion of the lakeshore to the west.

4) Many if not all of the key areas and features listed in (2) should eventually be taken into public ownership. Public acquisition of land for major intensive-use parks, and at least some of the historic features discussed below, will also be necessary. Obviously this cannot (and need not) all be done at once, but it is essential that an early start be made on a continuing, long-term, systematic programme of acquisition. This may involve a number of public agencies – municipalities, conservation authorities, the Department of Lands and Forests, and even the Federal Government, among others – but a priority sequence should be established, based on importance, level of need, vulnerability and cost. A study to establish this sequence and to recommend the allocation of responsibilities and costs should be started immediately.

5) Long Point is the most remarkable natural phenomenon in the Study Area and probably one of the most remarkable in Ontario. It is a 20-mile-long sandspit, built up from the erosion of the sandy shoreline to the west, and has become a unique natural ecological museum of incalculable value to the scientist and amateur naturalist. But it is also very fragile; any substantial human intrusion

would not merely disrupt the ecosystem but literally destroy the Point by removing the grass cover which holds the sand. Visible damage is apparent even from the present very restricted human use of the Point.

By great good fortune, most of the Point has been owned since the 19th century by the Long Point Company whose members have deliberately protected its natural character (hunting is, if anything, beneficial, as the Point has a larger deer population than it can support). As long as the Company retains its present policies to maintain the ecological balance of the Point, and allows access to scientists and naturalists, no public action seems warranted, except perhaps to protect the Point from trespassers landing by boat or snowmobile. (Considerable damage is already occurring on the north (Bay) side of Long Point due to trespassers landing by boat and snowmobile. Not only is this damaging to the ecosystem, it is also a cause of pollution, particularly in summer. This illegal misuse is quite impossible for the Company to control, and some form of special policing seems to be needed.)

If, however, either ownership or management policy should change, the Point should be immediately acquired as a regional, provincial or national nature reserve, and present policies should be continued. The Point should in no circumstances become an unrestricted public park despite its 20 miles of fine beach, since this would unquestionably mean the total destruction of its unique natural character and probably of the Point itself. Furthermore, existing cottage development at the east end of the Point should not be extended.

Similar arguments apply to Turkey Point, which should be permanently maintained as a wildfowl preserve.

6) Much land in the Study Area has been misused. Stream valleys have been cleared and eroded or filled, farm lands have been eroded, forest growth has been destroyed by grazing. The problem of misuse of land should be studied with a view to identification, education, provision of incentives and if necessary direct public action to restore such lands and

7.2 Agriculture³

to prevent future destructive land mismanagement.

7) Ecological expertise should be included in the staff established to continue the Haldimand-Norfolk planning programme, whether this is carried out by the Provincial Government or by local agencies.

8) It should be noted that the Joint Study Committee has strongly recommended the application of landfill and flood plain regulations along the entire length of the Grand River.

While both Haldimand and Norfolk are now predominantly agricultural in character, their agricultural economies are quite different, reflecting sharp differences in soils and history. Most of the land of Haldimand consists of clay loams, mainly graded as class 2 (that is, good with certain limitations). These soils support predominantly dairying and mixed farming. Norfolk, on the other hand, has sandy soil, mainly graded as class 4, or poor, and indeed 50 years ago Norfolk was a very poor agricultural county. The introduction of tobacco in the 1920's brought both prosperity and substantial European immigration, an economic and social transformation not experienced by Haldimand.

³This section owes a great deal to the papers prepared for the Joint Study Committee by Messrs. K. E. Best and J. R. Richards, Agricultural Representatives for Haldimand and Norfolk respectively, and to the *Haldimand-Norfolk Research Report* by L. G. Reeds and D. R. Maas of McMaster University (January 1971). None of these people, however, is to be regarded as responsible for any statement or recommendation in this Report.

The differences (and some similarities) between the two counties are brought out clearly by Table 12. In 1966 they had almost identical proportions of their populations living on farms, but the proportion of the *labour force* employed in agriculture was much higher in Norfolk (1961), reflecting seasonal farm labour in that county and off-farm employment in Haldimand. In 1966 Haldimand's main agricultural product (in terms of the total value of the product sold) was livestock, closely followed by dairy products, with poultry and eggs next. In Norfolk field crops dominated agricultural production almost completely. Items 10 and 11 in the table show wide differences in the value of both farms and their products, much to the advantage of Norfolk.

On the other hand, certain trends (Table 12) are common to both counties. Both have experienced a decline in farm population (from 8,900 in 1961 in Haldimand, 14,621 in Norfolk); a decline in the total area of farmland between 1961 and 1966 (though the area of *improved* farmland increased slightly in Haldimand); and a decline in the number of farms

Table 12/Agricultural Characteristics of Haldimand and Norfolk

	Haldimand	Norfolk
1 Farm population 1966 (proportion of total population)	8,254 (27.3%)	13,939 (27.6%)
2 Agricultural labour force, 1961 (proportion of total labour force)	2,474 (24.3%)	8,305 (42.7%)
3 Land area (acres)	312,320	405,760
4 Improved farmland, 1966 (acres)	227,568	255,657
5 Unimproved farmland, 1966 (acres)	40,258	79,069
6 Farmland as a percentage of total land area, 1966	85.8%	82.5%
7 Improved farmland as a percentage of total farmland area, 1966	85.0%	76.3%
8 Number of farms, 1966	1,937	3,657
9 Average farm size in acres, 1966	138.3	109.2
10 Farm value per acre, 1966		
a) land and buildings	\$182	\$539
b) machinery and equipment	\$ 52	\$ 97
c) livestock and poultry	\$ 43	\$ 20
11 Modal value of products sold by commercial farms, 1966 ¹	\$5,000 — \$9,999	\$25,000 +
12 Relative importance of products sold by value (including only products accounting for 10% or more of total agricultural production), 1966	Livestock (40.1%) Dairy Products (35.4%) Poultry and Eggs (13.7%)	Field crops (81.4%)

¹The \$5,000 value bracket having the largest single group of farms.

coupled with an increase in average size. These trends reflect the province-wide shift towards fewer and larger farms.

Some of the problems facing the agricultural industry in both counties are also characteristic of farming throughout Ontario. Paradoxically, in a hungry world, perhaps the most fundamental problem is an excess of productive farmland, reflected in both counties by the decline in farm acreage and in Norfolk by the system of "tobacco rights" which restricts the total amount of land on which tobacco may be grown. Other problems include the property basis of the municipal taxation system; the rising level of capital investment required to farm efficiently, coupled with high interest rates (in Haldimand, the average value of machinery and equipment rose from \$28 per acre in 1951 to \$52 in 1966; in Norfolk from \$38 to \$97); and the tendency of young people to drift away from the farm.

A further problem more specific to the two counties lies in land price inflation caused by speculative and development land purchases around Nanticoke. Although so far mainly confined to Woodhouse, Walpole and south Townsend, the impact of such purchases has allegedly raised prices to the point where it is not economic to buy land to farm in this area. Also, developments at Nanticoke may well cause difficulties for farmers through an increase in the air pollution already blamed for "tobacco leek" in Norfolk. On the other hand, there will be some compensations from the farmer's point of view, such as increased opportunities for off-farm employment (perhaps particularly valuable in Haldimand) and a market for farm sales to industrial employees seeking rural homes (though this will also tend to add to the competition for hired help).

Despite the current campaign against smoking, and its technically "poor" soil, Norfolk's long-term agricultural prospects seem bright. It is reasonable to expect a continuation of the trend towards fewer, larger farms, making for more economic (and probably also more specialized) units. Unless the anti-

smoking movement makes serious inroads on the market, a gradual increase in tobacco acreage is to be expected; but even if the demand for tobacco should slump drastically, Norfolk has a number of other strings to its bow. If warranted by market conditions, tree fruit production could be expanded, and there is potential for tender fruits as well. With both capital and feed grains available, conversion from tobacco to beef or hog production is feasible. With the prospect of a rapidly growing local demand, market gardening could be expanded as another possible direction for diversification, based on large operations suitable for machine harvesting, and possibly suggesting an expansion of existing fruit and vegetable processing industries.

Haldimand's position is very different, and at present its agricultural prospects appear much less bright. Although the land is good, mainly requiring only drainage to make it as productive as any in Ontario, Haldimand's farmers are generally in a financial squeeze, with their current incomes frequently too low to permit them to make the investments required to realize the full potential of the land. There is also some tendency to stick to traditional practices in defiance of sound economics. Consequently, for example, in 1968, more than a quarter of Haldimand's farmland produced hay, although the yield per acre in Haldimand is relatively low. After hay and pasturage, the largest acreage in that year was in oats, a crop which has a lower value per acre than other crops with comparable growing costs, such as barley, wheat and soybeans, which, however, require well drained soils.

The great majority of dairy farms in Haldimand are too small for efficient management and economic production. However, although the number of dairying operations has been declining, the value of dairy production in the county more than doubled between 1961 and 1966, and fluid milk production is likely to remain economically viable, particularly in Oneida and Canborough Townships. In other parts of the county, many

of the small dairy operators are likely to go out of business in the coming years without substantial rationalization of their operations, again implying consolidation and capital investment.

The basically good quality of the land in Haldimand potentially offers ample scope for diversification – into various field crops, into beef ranching, into vegetable production in the eastern part of the county, and into expanded hog production. The basis of a sound agricultural economy exists in Haldimand; the key to achieving it lies in the availability of investment capital (especially for land drainage) and in the rationalization of the industry and improved management practices.

The maintenance of a viable agricultural industry in Haldimand as well as Norfolk is essential because, as already pointed out, there is no practical alternative use for most of the land in the foreseeable future. Thus, rational land use planning may dictate measures which would not be justifiable strictly in terms of the economics of the industry. Put more bluntly, it may make sense to help the farmer to continue to farm even if it is not the cheapest way to supply the consumer, simply to keep the land green and productive rather than derelict.

Thus, apart from seeking solutions to the problems faced by Ontario farmers generally, an agricultural land use policy for Haldimand-Norfolk requires:

- 1) opting for the conversion of low-productivity land rather than productive land to non-agricultural use when this alternative is open;
- 2) the improvement of farming operations so that farms can be operated as economically and productively as possible.

This may mean (particularly in Haldimand) the gradual enlargement of farms to take advantage of economies of scale, and to allow more efficient operation. Improved methods and changes in products also need to be adopted.

These processes should be aided by

7.3 Forestry

future industrial and urban development, which will provide alternative uses for some of the less productive farmland, employment opportunities, and new markets for dairy and market garden products.

As a general land use policy, urban and industrial development, large parks, airports and other similar large users of land should, where possible, be directed to the least productive farm-lands. This policy does not arise from a dogmatic insistence on the need to preserve every acre of good farmland, but from the practical consideration that the land left to agriculture – which will inevitably include most of the Study Area – should be the land on which the economic viability of agriculture is greatest. Such a policy can, on the other hand, be only a general guideline and not an inviolable rule. It should not be interpreted as encouraging scattered urban and industrial development in rural areas.

As a corollary to this, any necessary measures should be undertaken to maintain the economic viability of agriculture where it is likely to remain indefinitely the prime economic use.

7.2.1 Agriculture: Initial Policies and Objectives

- 1) Firm controls should be imposed to restrict the conversion of agricultural land to other uses except in accordance with plans approved by the Government. While this may seem disadvantageous to the farmer, on balance it is not. Most farmers in any case would not be able to sell their land to developers or speculators; but all would benefit from greater certainty about the future and from the prevention of inflated land values.
- 2) Particularly in Haldimand, there is much room for improved farming practices, and especially for land drainage. The capital investment required for such improvements may call for new forms of farm financing assistance by the Provincial Government. Again it must be pointed out that sound land use policies, and not only direct return on investment, must be an important consideration in determining the extent of public financial support to agriculture.

7.3.1 Forestry: Long Range Objectives and Policies

Much of the Study Area, particularly Norfolk County, is still well forested. These areas are an important asset with great potential. But the potential economic value of forestry is not sufficiently appreciated, probably because many years must pass before the first "crop" can be harvested. Consequently, forestry has tended to be sacrificed to quick-return agricultural crops. In the long run, however, forestry might be a more appropriate use than farming in parts of the Study Area that have a high potential for timber production, including high-value hardwood (walnut and oak).

Apart from their immediate commercial value, forest lands are also extremely important as wildlife habitat. This role need not conflict with commercial usage, given proper forest management practices. Permanent maintenance and some extension of forest areas should be a basic planning policy, based on three categories of forest management: multiple use (including conservation, recreation and commercial timber production); management specifically for the production of high-value timber (mainly walnut) in limited areas; and maintenance of forest areas of special ecological interest.

7.3.2 Forestry: Initial Objectives and Policies

As a first step, two measures are recommended to encourage the maintenance and development of forestry.

- 1) Provincial legislation should be revised to strengthen the power of municipalities to protect forest lands and to secure reforestation. Should regional government be established, these new powers should be fully used at that level. Meanwhile, the adoption of uniform tree-cutting by-laws in the two counties would be desirable. The administration of these by-laws by a joint commission would help provide sufficient financial resources for adequate inspection and enforcement, but the legal feasibility of such a course is uncertain.

- 2) There appears to be a need for

financial support for planned reforestation, forest protection and forest management on private and municipal lands. This matter should be examined, and, if verified, increased funding should be made available through the Department of Lands and Forests, the conservation authorities or the municipalities.

7.4 Recreation

Some five million people live in cities within two hours' drive of the Study Area. By the end of the century this figure may have doubled. With more leisure time, higher disposable income and greater mobility, the demands on outdoor recreation will inevitably increase even more rapidly than the population. These facts give some indication of the pressures which will be placed on the highly attractive, but limited, natural recreation resources of Haldimand-Norfolk.

These fall into two broad categories: the Lake Erie beaches, which are a vitally important regional asset for intensive recreation; and several large areas, mainly in Norfolk but including the Oswego Creek and the Lower Grand River valley areas in Haldimand, which can accommodate a variety of forms of low-intensity recreation such as hunting and nature observation, but which are not in general suitable for intensive recreational use.

To these must be added a third category of major recreation area: tracts which do not have special natural characteristics but which will need to be set aside for intensive or active recreational use specifically to serve the growing urban population of the Study Area itself and of nearby cities.

The crucial importance of comprehensive planning and sound development of recreation resources is therefore clear. It is particularly critical because, as Professor Chanasyk points out, this part of the province, unlike, for example, Toronto and Ottawa, does not have within easy reach a large hinterland of high recreational potential capable of absorbing heavy demands.

Opportunities for development of winter sports are particularly restricted, for reasons both of topography and moderate snowfall, though ice-fishing and snowmobiling are increasing. Outdoor recreation opportunities in Haldimand-Norfolk are therefore highly seasonal: good in the summer (water-oriented) and in the autumn (hunting), moderate in the spring, rather low in the winter. However, as the Joint Study Committee

points out in its report, "There are many potential recreational facilities in the way of streams, small inland lakes, ponds, gravel pits, etc. These should be developed and utilized." Specific mention of the Waterford Ponds is appropriate here.

7.4.1 Recreation: Long-Range Objectives and Policies

1) The fundamental policy for outdoor recreation planning has, in effect, already been stated:

- a) the preservation, protection and wise management of all the outstanding natural recreational resources of Haldimand-Norfolk;
- b) the progressive acquisition and development of any lands over and above the previous category to provide sufficient space and facilities for the growing populations of both the Study Area itself and the surrounding region.

It must be stressed that there are two distinct (though overlapping) categories of recreational land: that which has specific natural recreational features (beaches, etc.), and that which must be developed to meet general recreational needs.

The future urban population of the Study Area will require such additional developed facilities as picnic grounds, sports fields and ski slopes. Some of these will be located within urban areas and others outside them. Accessibility is a most important consideration here; thus the planning of Woodhouse New Town, for example, must be accompanied by the provision of parklands nearby. At the same time, the natural recreational assets of Haldimand-Norfolk provide for specific kinds of activity for the people of a wide region – people from London, Hamilton, Buffalo and other centres.

Suitable standards must be set and maintained so that both types of recreational land requirements can be provided for the growing population within and outside the Study Area.

While this policy is fundamental, it will not be further elaborated on here, since it is covered partly in Subsection 7.1.1 and the rest must be dealt with through detailed planning and programming.

2) Since "Sunday driving" and automobile vacationing are very large features of the recreational scene – in fact enjoyed by more people than any other outdoor recreation activity – a system of scenic routes and parkways should be developed. The basic system should be triangular, following the lakeshore, Big Creek and Whiteman Creek, and the Grand River. Most of it could well consist of existing roads such as Highway 54 and Haldimand County Road 17 along the Grand.

The idea of a parkway along the entire north shore of Lake Erie has attracted a good deal of attention in southwestern Ontario. While it would be inappropriate for this Report to make recommendations on the subject, such a parkway, approximately following the lakeshore from Port Maitland to Port Burwell (Map 2), is one of the objectives of recreational planning in Haldimand-Norfolk. It would appear reasonable that this should eventually be extended westward and eastward to join the St. Clair and Niagara Parkways.

Within Haldimand-Norfolk, roads already exist along much of the lakeshore, that could provide the initial basis of a lakeshore parkway. But it is suggested that ultimately much of the parkway proper should run somewhat behind the shoreline itself, using concession roads or new routes through forested areas, with loops extending to the lake. In this way scenic driving and the service functions associated with the parkway could be separated from, though closely related to, the intensive recreational use of the shoreline itself.

This would avoid the undesirable mixing of traffic, intensive recreation, cottages and service functions which occurs, for example, at Turkey Point Provincial Park.

The future scenic routes and parkways are not envisaged as a completely independent road system. They would probably include sections of Provincial highways and county and even township roads as well as specially built roadways, and would vary in character and to some extent in capacity and function (Map 2). As opportunity arises, alternative routes could perhaps be developed also.

The system as a whole, however, should be planned with the following characteristics:

- a) it should follow visually attractive routes and provide easy access to recreation areas and points of interest;
- b) it should be specifically designed for low-speed pleasure driving, discouraging fast through traffic;
- c) it should be suitable for bicycles and special cycle paths should be included in or linked to the parkway where possible;
- d) design and landscaping of the system and all related services and facilities should be carried out at a high aesthetic standard;
- e) the system and its approaches should be identified by means of distinctive signs and markings.

3) An ultimate objective should be public ownership of all beach areas with substantial recreation potential, coupled with the regrouping of much of the existing strip cottage development into planned and serviced "cottage communities". In general the lakeshore beaches and the lands behind them should be considered a public recreational resource, not a private preserve. Eventually, the recreation-oriented stretches of the lakeshore should be divided among

- a) public beach parks with adequate inland space for other recreation facilities such as sports fields, together with catering facilities, parking and other necessary services;
- b) cottage clusters with direct access, but no special rights, to stretches of beach;
- c) marinas and other directly water-oriented recreation facilities.

Existing facilities such as marinas, docking facilities at Port Dover and elsewhere, and Provincial Parks, will need to be progressively expanded. The Joint Study Committee's recommendation for a marina at Port Maitland deserves thorough consideration.

The quality of the waters of Lake Erie is clearly vital to the recreational potential of the shoreline. Both the Federal

and the Provincial Governments are actively concerned about the reduction of water pollution. It may be assumed that further deterioration of Lake Erie will be halted and perhaps reversed. The possible effects of the discharge of cooling water from the Nanticoke Generating Station into the lake are under careful study, and Ontario Hydro has stated that if these effects turn out to be deleterious, measures can be taken to correct the situation.

4) Port Dover, already an important recreation centre, has great potential for expansion of this role to serve both local and regional needs. With its beach, river, harbour, Silver Lake and the heights overlooking the lake and the town from the east, it has unique natural assets, to which have been added an amusement park and a marina. Picturesque touches are added by pleasure boat and fishing boat docks at the mouth of the Lynn River. On the whole, however, the possibilities of the site have not been well used. For example, dingy cottages, the shabbiness of the amusement park, and industrial zoning along the river detract greatly from Port Dover's potential charm.

But the potential is still there. With carefully planned redevelopment and new development, Port Dover could and should be a major resort in the future. Expanded facilities – marinas, convention hotels overlooking the water, varied entertainment facilities and active recreation areas on the high ground east of the town – all would harmonize very satisfactorily with fishing boats and drying nets, complemented by the more secluded, tranquil atmosphere of Port Ryerse nearby.

Port Rowan should also serve as a recreation centre, though of a rather different character. Emphasis here should be on services to sports fishermen, picnickers, tourists, pleasure boaters, hunters and amateur naturalists, and on its attractions as a retirement community.

In neither Port Rowan nor Port Dover should any development be permitted on waterfront sites, or other sites with recreational or scenic value, except of a kind in keeping with the role and char-

acter of the town. Since Port Dover is a commercial fishing port, however, such development may have to include some potentially offensive uses such as fish cleaning and packing.

Finally, there are small lakeshore communities such as Normandale and Fisher's Glen which possess a good deal of charm, though now largely based upon summer cottages. These should retain their character and the scale to which they owe their attractiveness. Some expansion is possible, but would have to be sensitively planned and carried out. Measures are also vitally needed to eliminate pollution from septic tank effluent.

7.4.2 Recreation: Initial Objectives and Policies

1) Official plans and zoning in all municipalities should be carefully reviewed to ensure that, as an interim measure, all areas and sites of special recreational significance are subject to controls adequate to safeguard them against inappropriate use.

2) As part of the programme recommended in Subsection 7.1.2, item (5), progressive acquisition of recreational land for public use should be undertaken without delay. This should include both land for general recreation related to urban growth, and sites and areas with special natural characteristics. Systematic planning and phasing of acquisition will be essential to ensure that growing needs are met and that at the same time key sites are not irretrievably lost. Highest priority should be given to the Lynn and Black Creek valleys and to the lakeshore in the Townships of Woodhouse and Walpole.

3) Detailed planning of the parkway system should be started, and land acquisition undertaken where there appears to be an immediate need to secure the necessary right-of-way.

4) A detailed study of the future recreational use of the lakeshore should be

7.5 Historical Resources

undertaken.⁴ This study would have two general objectives. The first should be to determine the optimum uses for all of the lakeshore with recreational potential and then to identify and plan sites for public parks, cottage clusters, marinas and other features; to plan an access system; to prepare a sequential programme of public land acquisition; and to examine the adequacy of present public access to the beaches (which should be indicated by signs).

The second objective should be related specifically to the question of summer cottages. Aspects to be dealt with include: physical condition, maintenance, conversions and sanitation; control of year-round occupancy; and sequence of removal or relocation. Year-round occupancy would be an urgent subject for this study. While helping to alleviate immediate housing shortages, it tends to anchor the cottages and add to the cost of their acquisition, and to add also to health problems and education costs. Pending the results of a detailed study, year-round occupancy of cottages not adequately and safely winterized or provided with satisfactory sanitation facilities should be rigorously controlled, as should conversion of other cottages.

5) A comprehensive plan for recreational development of the Grand River valley should be prepared by the Province. What is envisaged is comparable to the 1968 *Niagara Escarpment Study - Conservation and Recreation Report* or the 1971 Rideau-Trent-Severn recreational development report, *Rideau-Trent-Severn, Yesterday, Today, Tomorrow*.

6) The official plans and zoning by-laws (existing, in draft, or to be submitted) of the Town of Port Dover and the Village of Port Rowan should be revised in accordance with the general policies proposed above. In particular, the industrial designation of lands on Silver Lake and the Lynn River should be altered. In the case of Port Dover, the Urban Renewal Study should be revised

in accordance with the concept of Port Dover as a resort and recreation centre.

7) Feasibility studies should be undertaken into the possibility of using for recreational purposes the solid wastes from Stelco and the Hydro Generating Station, fill from excavation at the Woodhouse townsite, and Hydro cooling water. Both Stelco and Hydro will produce very large quantities of inorganic solid waste in the form of slag, which it seems they plan to store on site.

One possible use for this material would be to build an artificial ski hill, like "Mount Blackstrap" in Saskatoon, constructed with Federal and Provincial aid for the 1971 Canadian Winter Games. A ski hill near Port Dover would help the town become a year-round resort and would partly fill a major deficiency in Haldimand-Norfolk outdoor recreation resources. An appropriate site would be land east of Port Dover now owned by Nanticoke Developments Ltd. If the scheme (which would also provide a means of disposal of organic wastes) were found to be feasible, the possibility of some form of land exchange involving part of the Woodhouse townsite could be considered.

This type of artificial hill could also be considered for other locations near existing recreation resources (e.g., Waterford Ponds and the Grand River valley), though transportation costs of the waste material might be prohibitive.

The second possible use for slag is the creation of an artificial lagoon. Hydro will be extracting large volumes of water from the lake and returning it at a substantially higher temperature. If this water were fed into a lagoon, two purposes might be served: protection of living organisms in the lake from the effect of increased temperatures; and provision of warmed water for swimming, water sports and perhaps even improved sport fishing.

The practicability of both of these schemes is unknown, but in both cases the apparent potential benefits seem to warrant further examination.

Most of Canada's history has left some physical imprint on Haldimand-Norfolk: the villages of the Attiwandarons or "Neutral" Indians and later the Iroquois and the Mississaugas; the paths and cabins of the French missionaries and explorers (notably the wintering place of Dollier and de Galinée, which has been identified on Black Creek); Governor Simcoe's Loyalist settlements; Fort Norfolk overlooking Turkey Point; the warfare of the early 19th century; and the continuing process of settlement, clearing of land, development of industry and growth of towns through the 19th and 20th centuries.

Much of the evidence has been lost, but some traces remain. Perhaps most notable is the hamlet of Vittoria, for ten years (from 1815 to 1825) the administrative and judicial centre of London District – thus the "capital" of western Ontario. A number of old buildings survive, including the house of Colonel Joseph Ryerson, built in 1818. Though Vittoria is perhaps unique, many buildings of historic and architectural interest, from mills to mansions, are to be found in the towns and countryside of both Haldimand and Norfolk.

It should be a central objective of planning policy to preserve these as the surviving physical heritage of a history of which much evidence has already been lost. Where buildings of historic significance cannot be retained on their original sites, removal and reconstruction should be undertaken. This might include some of Nanticoke's older buildings. A street or precinct of old buildings could be incorporated in Woodhouse New Town, not as a museum piece but as an integral, functioning part of the community, serving as homes, shops or offices. Removal of old buildings to Vittoria should be considered so that, while remaining a living and growing community, it would also be a unique repository of historic architecture. Part of the Village of Cayuga might serve a similar purpose.

To complement the preservation of surviving old buildings, reconstruction and reproduction of some of the lost landmarks of local history should be

⁴The current HNS-JSC studies of the lakeshore (see footnote, page 00) would provide a valuable starting point.

undertaken; for example, a Neutral or Iroquois village comparable with Midland's Huron village; Fort Norfolk to match Fort Niagara; replicas of the cabins of the early explorers. The boldness of creating a new city should be matched with respect for the history of its setting expressed in the re-creation of some of its visible evidence.

7.5.1 Historical Resources: Initial Objectives and Policies

Inventories of historic buildings are being prepared by both the Federal and Provincial Governments, but these need to be rounded out by local efforts. What is of critical importance, however, is the means of protecting such buildings; their inclusion in a catalogue in itself does nothing to prevent their destruction. Many recommendations have been made by such organizations as the Architectural Conservancy of Ontario for the preservation of historical buildings, and it would be pointless for this Report to cover the same ground again.

So far as Haldimand-Norfolk is concerned, two specific recommendations are made in view of the rapidity with which growth will take place and the consequent grave threat to the surviving relics of the area's history. First, the owner of any structure included by any level of government in an inventory of buildings of historic or architectural interest should be required to give to that government six months' notice of intention to demolish or alter. Second, a fund should be established to purchase and, if necessary, relocate such buildings where arrangements cannot be made for the owners to retain them unharmed and *in situ*. This fund might be administered by the conservation authorities, though other possibilities should be considered.

8.1 Transportation Demand

This section of the report deals with regional transportation, and other regional linear services, with emphasis on highways, railways, pipelines and hydro transmission lines which either traverse the Study Area or run from within it to points outside it.

The principal physical transportation needs which can now be foreseen, classified by purpose rather than by mode, are (Figure 9):

- a) the shipment of bulk raw materials (ore, crude oil) and fuel to the industrial area, mainly by water and pipeline;
- b) the shipment of steel and petroleum products out of the industrial area, mainly to Hamilton-Toronto but also westward and to a fairly small extent northward and eastward;
- c) journeys to work, mainly to Nanticoke;
- d) recreational travel, dispersed but directed mainly towards the lakeshore;
- e) interregional/international east-west movements of people and goods.

(This basic pattern does not allow for the influence of Dofasco, which would introduce a major new origin and destination for steel, raw materials, fuel and work trips, that would effect patterns of movement and transportation needs in the western part of the Study Area.)

8.1.1. Future Demands

Land Modes

1) Road (assumes no new technological development in land transport that will significantly affect road use). The highest demand will be between Wood-

house-Nanticoke and Hamilton (goods and work and recreational personal trips), and east-west. The latter will have several components:

- a) interregional and international goods and personal trips; goods movements out of Nanticoke;
- b) work trips to and from Nanticoke;
- c) recreational personal trips dispersing laterally to the lakeshore.

Secondary demand will be between Woodhouse-Nanticoke and Brantford-Kitchener-Waterloo-Galt.

2) Rail. By far the highest volume of rail traffic for a long time to come will be interregional, east and west along the CNR and Penn Central lines. Traffic between Nanticoke and Hamilton by CNR (via Hagersville, Caledonia and Brantford) and by CPR (northward through Brantford) will probably tend to increase. High-speed rail passenger service between Woodhouse New Town and Hamilton is a long-term possibility.

3) Pipeline. New pipeline construction will include two roughly parallel oil pipelines north-eastward from Nanticoke to carry crude oil into the Texaco refinery and refined products out; a Union Gas pipeline from the London area to Nanticoke; and water and sewage pipelines to and from Lake Erie.

Figure 9/Transporation of People and Goods Future Needs

	Land			Water	Air
	Road	Rail	Pipe		
Shipment of Ore				X	
Scrap		X			
Crude Oil	X		X		
Fuel				X	
Steel Products	X	X			
Petroleum Products	X	X	X	X	
Other Cargo	X	X		?	X
Journey to Work	X	X		?	
Other Business	X	X		X	X
Recreational Trips	X	X		X	X

8.2 Transportation: Long-Range Objectives and Policies

Other Modes

4) **Water.** Shipment of bulk raw materials and fuel to Nanticoke industries will be made by lake transport, as will shipments of oil products from the Texaco refinery. A demand for personal trip facilities (e.g., a hovercraft service across Lake Erie) may eventually arise.

5) **Air.** Scheduled passenger services will continue to be handled for the foreseeable future by Toronto Airport and Mount Hope. However, the volume of air freight movements and non-scheduled and private passenger trips will grow, requiring perhaps at least one regional airport for this type of local service. With rapid growth in private flying for recreational and agricultural purposes, a need for local airfields and airstrips is already developing.

Social organization and economic activity find their physical expression statically in the use and development of land, and dynamically in the movement of people and goods. Land use and transportation are thus in effect the two sides of a single coin. Means of transport come into being to link one community to another, but in so doing in turn stimulate development in new places.

This process is well illustrated in Haldimand and Norfolk. The first white settlements were on the lake and the Grand River – the means of transportation. The Plank Road (Highway 6) was built to link the Lake Erie communities to those of Lake Ontario; the Talbot Road (Highway 3) similarly linked settlements established on the shores of lakes and rivers. Inland villages grew up where these roads met or crossed rivers, other roads and, later, railways. Thus the present urban pattern of Haldimand-Norfolk was established.

Now a new cycle is beginning. Stelco is coming to Nanticoke in large measure because of the availability of lake transport and accessibility – ease of transportation – to markets. Similar factors helped to bring Hydro and Texaco. The new industries in turn are bringing about the building of new railways and roads. Eventually, transportation needs generated both within and outside the Study Area will produce an entirely new transport system – probably in the form of a freeway network, possibly a new mode of high-speed transportation. This in turn will have a new impact on land use and development.

But if the transportation system is allowed to evolve solely in relation to the changing patterns and volumes of movement – the “desire lines” – then transportation, rather than the public interest, will continue to be the dominant influence on land use and development. So while the new system in its general structure must of course meet the transportation needs it is intended to serve, in its detail it must be planned to help achieve the objectives of the plan as a whole. Thus, the basic objective of transportation planning must be to make adequate provision for the movement

of people and goods *in a way that will help achieve land use and development objectives*. This is the underlying theme of all other proposals relating to transportation.

Subject to this overriding purpose, transportation planning should aim at the development of an integrated overall system which is capable of adapting to changing circumstances and the emergence of new modes of transport. Long-range planning should therefore focus initially on determining the principal “channels of movement” in relation both to the foreseeable demands and to development policies. Translation of this broad concept into specific modes and rights-of-way will then require the identification of sub-systems for different kinds of need, e.g., internal origin goods movement, interregional movements, commuting, recreational travel. The location and nature of the key points where people and goods shift from one route or mode to another (“articulation”) are not only essential to the efficient working of the system, they are also key locations in relation to land development. Their placing, therefore, must be determined accordingly. These are the general principles which should govern the continuing development of the Study Area’s transportation network.

8.3 Service Paths and Corridors

In discussing the physical arrangement of land transportation facilities and other linear services, three terms will be used for the sake of convenience. A *service path* is a general direction which linear services tend to follow, comparable with a traffic desire line; a *service corridor* is a defined tract of land set aside specifically (though not necessarily exclusively) for service rights-of-way; and a *right-of-way* is the land actually required for a particular service or combination of services. The term *service* itself includes all forms of movement of people, goods (including liquids), power and communications.

Two main service paths run through Haldimand-Norfolk. At present the more important of these is the east-west path from upstate New York and the Welland area to London, Windsor and Detroit; the second is the Hagersville path which connects the Simcoe-Nanticoke area with Hamilton and other places to the north and northeast. A Waterford path connects Simcoe with Brantford, but this is at present substantially less important than the other two. (Figure 10.)

The East-West Path

The east-west path is mainly inter-regional and international, and is likely to remain so. It includes Highway 3, which is the main highway along the northern side of Lake Erie, and the Canadian National and Penn Central main lines which largely serve as carriers between the American midwest via Detroit and the eastern U.S. via Buffalo. While the railways do not at present have any great direct impact on the Study Area, they emphasize its strategic position between two of the most heavily urbanized and industrialized areas of North America. There is no foreseeable prospect of additional railway lines along this path, but it seems inevitable that a road of freeway standard (or the equivalent) will eventually be needed despite current and planned improvements to Highway 3. In addition, high voltage transmission lines are to be built from the Nanticoke Generating Station westward to the London-St. Thomas area, and conversely a gas pipeline will be built from the latter area to serve industries at Nanticoke.

The main natural obstacle to the construction of new services is the Grand River, particularly below Cayuga. The only other significant constraints are urban areas (existing and future) and the proposed west Norfolk and Grand River green belts (Subsection 7.1.1 (3)).

The Hagersville Path

The role of the Hagersville path is rapidly becoming more important as the main link between the Simcoe-Nanticoke area and the rest of Ontario. At present its main elements are the CNR line from Hamilton to Jarvis, now extended south to serve Stelco and the Hydro Generating Station, and Highway 6, which will eventually have to be replaced as the main traffic artery by a freeway or equivalent transportation service. A high voltage transmission line is already being built from the Nanticoke Generating Station to the Middleport Transformer Station northwest of Caledonia. This path will probably soon include the two oil pipelines mentioned above, and perhaps also trunk water and sewage pipelines and telephone cables.

Because the origin-destination distance is much shorter than in the case of the east-west path, there is less flexibility in routing these services. Also, there are important constraints in the form of the Grand River, extensive quarries at Hagersville, the existing communities of Jarvis, Hagersville and Caledonia, the existing highway and railway, and the Six Nations and New Credit Indian Reserves. In addition, the triangle bounded by Highways 6, 3 and 54 is a potential site for large-scale urban growth in the future (Section 5.1). Thus the possible width of the Hagersville path is strictly limited.

The Waterford Path

The Waterford path includes Highway 24 and the Lake Erie and Northern, and Toronto, Hamilton and Buffalo railways, also used by the CPR. Use of Highway 24 will probably increase considerably, but its capacity (four lanes, allowing for possible widening) seems unlikely to be exceeded in the foreseeable future. As the rail connection becomes a northerly extension of CPR's route between Simcoe and Nanticoke, its importance will increase. (Subsection

8.5.2.) Construction of major new facilities along this path is not now foreseen, however.

SERVICE PATHS

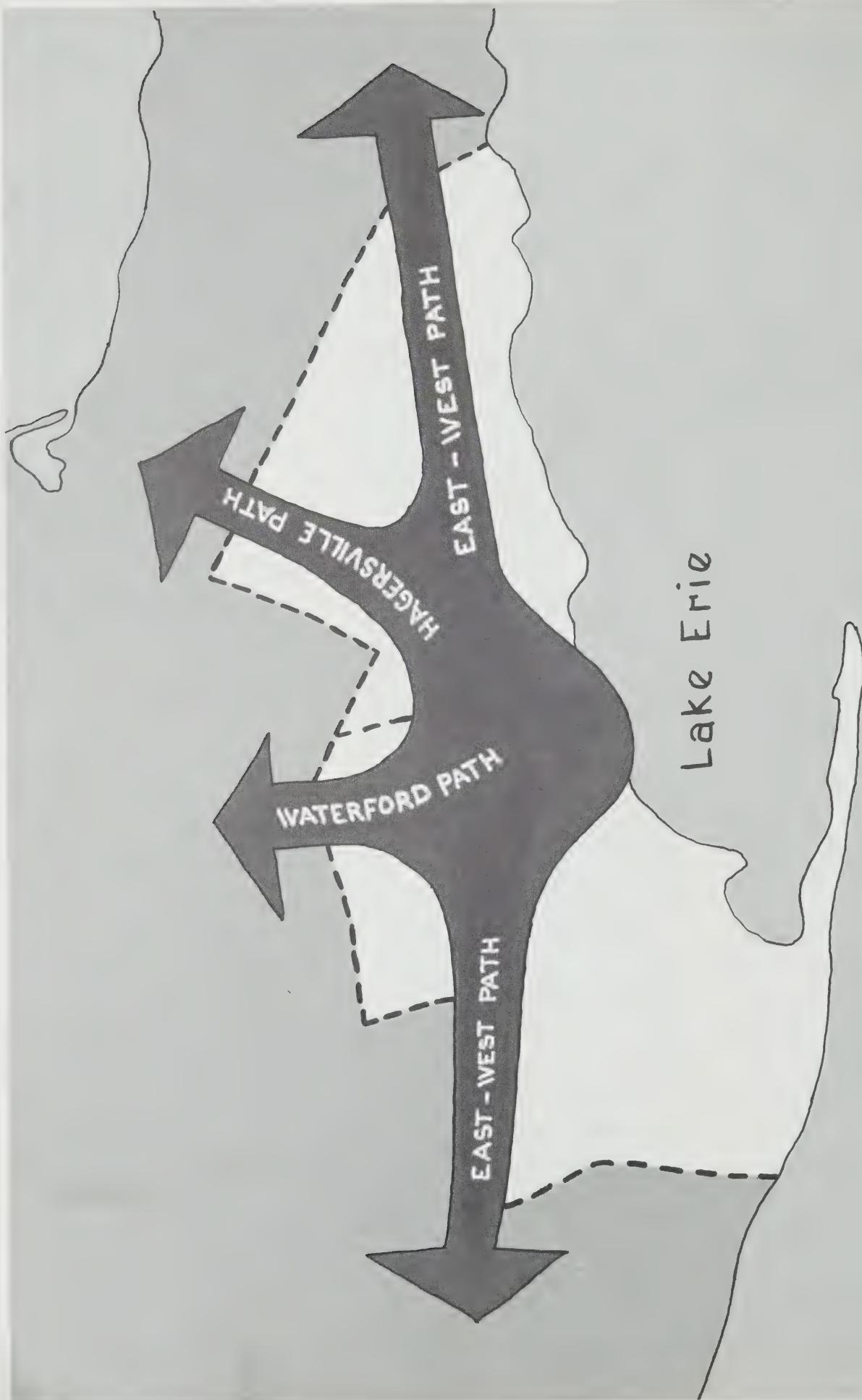


FIGURE NO. 10
HALDIMAND - NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

8.4 Transportation: Initial Policies and Objectives

A variety of improvements to the present transport system are currently in progress, planned or under consideration, including improvements to Provincial highways and county roads and new railway lines and yards. Unfortunately, it appears that these measures are now often planned independently of each other and in relation only to short-range projections of needs, contrary to the principles discussed in Section 8.2. The Niagara-Lake Erie Transportation Study, currently in progress, should enable this situation to be corrected. While movements cannot be predicted for more than a few years with accuracy, one of the aims of the study should be to establish probable *orders of magnitude* as far ahead as practicable, for both personal and goods movements, as well as to provide more precise short-term estimates. In view of the rapidity of growth expected in and around Haldimand-Norfolk, it is only in relation to the results of such a study that short-term plans can be properly assessed.

Based on this study, a comprehensive transportation plan should be prepared in accordance with the principles discussed in Section 8.2. Then, based on the plan, a phased programme of improvements to the present transportation system together with the protection of rights-of-way (or corridors) for long-range needs should be devised. The plan (which should include provision for transportation-related development sites – highway service centres and switchyards, for example) should be regularly revised.

In the following subsections, specific recommendations are made for new or improved transportation services related to this Report's land use and development proposals and to the principles discussed in Section 8.2. In all these recommendations it is recognized that detailed planning will be needed and that the long-range proposals at least would require review in relation to the comprehensive transportation study. Routes and locations as described are intended to be indicative only, and in no case is it possible to be specific about timing.

8.5 Linear Services

8.5.1 Roads

In this subsection, where the term "freeway" is used, it is recognized that before all the proposals are carried out, the freeway might be replaced by another means of high-speed long-distance transportation. It is assumed, however, that the same locational determinants and principles would apply. "Freeway" should therefore be read throughout as including any successor mode.

The following basic road network is proposed for the Study Area.

- 1) Highway 3 will remain the main east-west road through the Study Area until a new freeway is built ((4) in this subsection), and will have to accommodate greatly increased traffic volumes. Bypasses will be needed around Simcoe and Jarvis, as will other measures to increase capacity. A bypass south of Delhi may also be necessary.
- 2) The first large-scale highway project likely to be needed is a limited-access highway connection from the vicinity of Hamilton to Woodhouse-Nanticoke (referred to as Highway 6A). The proposed route would cross the Grand River west of Caledonia, generally following the new Hydro transmission line approximately as far as Highway 3 east of Jarvis, though skirting Hagersville well to the east to permit the town to grow in that direction. From Highway 3 it would follow Haldimand County Road 3 (Nanticoke Side Road) to Haldimand County Road 11. This highway should be planned as part of the proposed "Hagersville corridor" (Subsection 8.5.5).

There is a possible alternative to the proposed Highway 6A – a route directly north from the Nanticoke area to meet Highway 403 east of Brantford. This might have the advantage of serving both Hamilton-bound and Brantford-bound traffic. It would, however, traverse the Six Nations Reserve, and cannot be considered a serious possibility unless acceptable to the Six Nations.

- 3) The proposed initial major road system for Woodhouse-Nanticoke is basically a grid consisting of Highway 3

and a parallel route to the south, linked by north-south roads. The second east-west road would comprise Highway 6 eastward from Highway 24 and extended to the north of Silver Lake (Subsection 8.5.5) to join Norfolk County Road 43 and continue through the Stelco and Texaco sites, following Haldimand County Road 11. The main initial north-south links would consist of (or follow approximately) Norfolk County Road 8; a new road west of Black Creek through the Marburg area; the new Highway 6A; and the Cheapside Side Road.

This has the advantage of being in effect a "modular" system readily adapted to phased development. Initially, apart from the Simcoe and Jarvis bypasses, completely new road construction would be needed only for the Marburg and Silver Lake sections and to extend Highway 6 west to Norfolk County Road 8. Except for these, the basic system could use existing roads, though detailed plans may have to allow for eventual replacement of these on new rights-of-way.

- 4) Eventually, Highway 3 will almost certainly have to be replaced as the main east-west road through the Study Area by a new freeway or equivalent facility. There are three general routes this might follow: along the lakeshore; in the vicinity of the Penn Central line; or close to the existing Highway 3. The first would be undesirable for several reasons, including the difficulty of accommodating it to the development of the Woodhouse-Nanticoke area, the problems involved in crossing the Grand River near its mouth, and the development pressures it would bring to the lakeshore and to the area of Long Point, Turkey Point and the lower Big Creek and Otter Creek areas. The second alternative would avoid these problems and also skirt the snow belt which more or less follows Highway 3; but it would not adequately serve existing communities such as Jarvis, Simcoe and Delhi, nor the expected future development. As an interregional highway, it would tend to duplicate the 401-403-Queen Elizabeth Way route.

Consequently, the preferred route (with the northern route as second choice) approximately parallels Highway 3. This

route would provide effective service to existing towns, to Woodhouse New Town and its possible extensions, and to the Nanticoke industrial area. No recommendations are made at this time regarding a precise alignment; this will require careful detailed planning in relation to Woodhouse New Town (and to its possible northward extension) and other communities and natural features along the route. Very generally, though, it would seem appropriate for the new highway to be located fairly close to the CNR line between Tillsonburg and Simcoe, to cross Highway 3 near Jarvis to serve the Nanticoke industrial area, to bend north-westward to cross the Grand River south of Cayuga, and thence to bend eastward following the alignment proposed by the Department of Highways in the *Niagara Peninsula Planning Study* (1964).

5) It should be noted that the Department of Highways plans to construct a new road from Highway 3 at Cannington to Highways 20 and 57 at Bismark, thus materially improving the connection between the Study Area and the St. Catharines-Niagara Falls area. Highway 56 will also be extended to the new Highway 3 east of Cayuga. A further extension of Highway 56, across the Grand, might well be required to give improved access to the Hamilton area should there one day be large-scale urban development in the Rainham-South Cayuga area (Alternative East) or to serve continuing industrial growth east of Nanticoke.

While Highway 24 together with the Cockshutt Road and the Indian Line-Nanticoke Side Road route seem likely to be able to accommodate traffic between Brantford and Simcoe-Woodhouse-Nanticoke for the foreseeable future, a north-south freeway parallel to Highway 24 may eventually be needed.

Road improvements to deal with existing deficiencies are needed between Dunnville and Hamilton and on Highway 59 at Long Point.

8.5.2 Railways and Public Transport

The present basic pattern of railway lines in the Study Area is rather like an inverted "A", with Simcoe-Nanticoke at

the apex, Hamilton and Brantford respectively at the ends of the two legs, and the east-west CNR and Penn Central lines forming the crossbar. This basic pattern is unlikely to change. Apart from relocation, twinning, etc., of existing lines, new railway construction will probably be confined to the provision of spurs to serve industrial sites.

In the past, the railway companies have been effectively free to build new lines as and where they wished, exclusively on the basis of the economics of their own operations. This should not be allowed to continue. Since the railways are under Federal jurisdiction, the cooperation of the Canadian Transport Commission should be sought to ensure that, wherever possible, existing trackage is shared. Where this is not feasible new lines should be built along established corridors or otherwise in accordance with the principles and policies outlined in this Report. This applies specifically to the provision of rail service to the Nanticoke industrial area. A well-located line has already been built southward by CNR, east of Jarvis, towards Nanticoke. In conjunction with Hydro transmission lines, the proposed Highway 6A, and probably other services such as a water pipeline, this line will form an extension of the Hagersville corridor. This should be used, for example, in the event of a spur line being constructed from the Penn Central line to Nanticoke.

The principal issue involving railways at present concerns the location of a new CPR line to serve Stelco. CPR plans to extend a spur south-eastward from the Lake Erie and Northern line south of Simcoe. Since this would run directly across the proposed Woodhouse townsite, it is highly undesirable and should be firmly opposed (this route has also aroused vigorous local opposition on several grounds). The most satisfactory alternative would be the construction of a line from the LE&N northeast of Simcoe that would either allow CPR trains to use CNR trackage, or be continued to the Stelco site parallel to the existing CNR line. If this is not feasible, it would be acceptable for CPR to use the abandoned LE&N right-of-way south of

Simcoe approximately as far as Highway 6, and then to run eastward parallel to Highway 6, north of Port Dover (Subsection 8.5.5). This route would be preferable to the one presently proposed by CPR, but less desirable than the first alternative. Among other difficulties, it would not meet the objections which have been raised locally.

It should be noted that CPR currently has an application before the Canadian Transport Commission to reactivate the LE&N line north of Waterford and transfer to it the CPR services now using the Toronto, Hamilton and Buffalo tracks. This also has encountered local opposition, and it does not seem desirable to have two active railway lines at most three miles apart carrying traffic for a distance of only 15 miles between the same points. The transfer of service might, however, be advantageous if it helps CPR to find an alternative to its present plans south of Waterford to Nanticoke.

The use of railways for interurban rapid transit must be regarded as a distant prospect. For the foreseeable future, public transportation needs can probably be met by bus services on existing highways and eventually directly between Woodhouse New Town and Hamilton on the proposed Highway 6A. Nevertheless, the proposed eventual use of the CNR line for fast passenger services (perhaps as an extension of the GO system) should not be ignored in considering any actions that would affect this line: e.g., new transportation routes crossing the Escarpment in Hamilton. Any specific proposals would be premature pending completion of the proposed transportation study.

8.5.3 Power Transmission Lines

Ontario Hydro is currently building a transmission line from the Nanticoke Generating Station to Middleport. This, with other lines to use the same right-of-way in the future, will form a part of the Hagersville corridor, and their relationship to other services should therefore be examined without delay.

A 230 kv line will be required from Nanticoke to a new transformer station

southeast of Simcoe. The preferred route for this line would be northward from Nanticoke or from the Stelco site, then westward north of Highway 3, then south to the transformer station. As an alternative, the line could cross the Stelco site, run westward north of Port Dover (Subsection 8.5.5) and then north to the transformer station. A direct alignment from the generating station to the transformer station would run directly across the Woodhouse townsite and should not be contemplated in any circumstances.

High-voltage lines will later be needed to connect Nanticoke to the London-St. Thomas area. Through Norfolk these could follow roughly the same alignment proposed for the new east-west freeway (Subsection 8.5.1), but this would mean a very high concentration of major surface and elevated services. Also, as further discussed in Subsection 8.5.4, it is doubtful at present whether the advantages of such a course would offset the very strong functional and environmental impact. Pending further study, therefore, the preferred route would be further north, in the vicinity of the Penn Central line. High-voltage transmission lines should in no circumstances be constructed through the Townships of Charlottesville, North and South Walsingham, south Middleton, or Houghton. There is no reason to locate this line so far south except to serve the prospective Dofasco plant at Port Burwell, probably at least 15 years off, if it is in fact built. The environmental disruption that would be entailed could not, therefore, be justified.

There is also a possibility that high-voltage transmission lines will be required eastward from Nanticoke. If so, they should be kept well back from the shoreline and should both respect the character of the Grand River valley and observe the possibility of eventual large-scale urban development between Selkirk and Dunnville.

In all cases, the planning and construction of transmission lines should observe the principles set out in Subsection 8.5.4.

8.5.4 Linear Services and Corridors: Long Range Objectives and Policies

The desirability and feasibility of establishing a system of service corridors in the counties north of Lake Erie has been given preliminary study by the Government's interdepartmental Task Force on Multiple-Use Service Corridors, South Central Ontario (MUSC Task Force). While no definitive conclusions have yet been reached, the work so far carried out suggests that the corridor principle, involving the concentration of several services in a single relatively narrow strip of land, or even in a common right-of-way, may have only limited applicability in much of the east-west path. Apart from the technical and administrative difficulties involved in creating such a corridor, if applied rigidly its effects might, on balance, be harmful rather than beneficial. The optimum alignment for one service would almost certainly be inefficient and/or uneconomic for others, due to topographic factors, varying design requirements and differences in terminal and service points. The combination of, for example, a freeway, a railway line and a 500 kv transmission line on a common right-of-way or on adjacent rights-of-way could be extremely disruptive of land holdings and local road systems, and would create a most formidable physical and visual barrier across the landscape. Finally, the servicing of adjacent properties, perhaps especially industrial sites, would tend to be complicated rather than facilitated by such an arrangement. It is not at present clear that the advantages, such as economies in right-of-way acquisition, would outweigh these drawbacks.

Consequently, strict application of the corridor principle in the east-west path is not recommended pending further study. But the planning and acquisition of all service rights-of-way should be governed by certain general principles applied on a case-by-case basis:

- 1)** Areas which are urbanized or may be expected to become so, and areas of strategic natural recreational or aesthetic importance, should be kept free of linear services, other than those

which are extremely unobtrusive, unless no alternative is possible.

2) The west Norfolk green belt (Sub-section 7.1.1 (3)) should be traversed where it is narrowest: i.e., near Highway 3, or further north,¹ and as unobtrusively as possible.

3) In all cases, the planning of rights-of-way and the design of surface and elevated structures should be carried out so as to respect the landscape and the pattern of land holdings. Where a major linear service must pass through the kind of area referred to in (1) or (2), particular care should be given to alignment and design in relation to the present character and prospective use of the area.

4) Planning of rights-of-way should be coordinated so that where it is feasible and useful they can be combined.

An entirely different situation applies in the case of the Hagersville path because of the locational constraints and the need to allow both for extensive urban growth and for the probability that new right-of-way needs will arise fairly regularly as growth continues in the Woodhouse-Nanticoke area. Consequently, the corridor principle is much more directly applicable, and specific lands will need to be reserved for the provision of rights-of-way as required. These should be carefully coordinated to conserve land and to minimize adverse effects on urban development, agriculture and the natural environment.

A corridor might also be required to accommodate east-west services immediately to the west of the Stelco site. This Report (Subsection 8.5.1) recommends that a road to the north of Port Dover form a part of the initial east-west Woodhouse-Nanticoke major road system. Substantially the same alignment could be used by the CPR (Subsection

¹In their brief to the Joint Study Committee, the Norfolk Field Naturalists recommend "that no service corridors be permitted south of No. 3 as a minimum requirement, and the further north these corridors, rail lines and trunk highways can be established, the better".

8.5.2) and by Ontario Hydro (Subsection 8.5.3). Neither a railway nor a transmission line in this location is desirable in terms of general planning for the area, but they might turn out to be the least undesirable of the feasible alternatives. If so, a carefully planned corridor, including screen planting, will be imperative.

8.5.5 Linear Services and Corridors: Initial Objectives and Policies

1) The policies described in subsection 8.5.4 should be approved as mandatory guidelines for all Government departments and agencies responsible for the planning, construction or regulation of linear services in Haldimand-Norfolk, and the cooperation of the Federal Government should be sought with respect to services under its jurisdiction.

2) Detailed planning of the Hagersville corridor, already started by the MUSC Task Force, should be continued, completed and made binding on all linear services using this belt. This is urgent because of possible implications for the current acquisition of a right-of-way by Ontario Hydro.

3) Detailed planning of the corridor north of Port Dover should be undertaken if, and as soon as, it is determined that railway and/or transmission lines will be required on this alignment.

4) Detailed studies should be undertaken of those points where east-west linear services must cross the west Norfolk and Grand River green belts, to devise routes and standards to minimize environmental damage.

5) A "clearing house" should be established through which *all* plans for the construction of linear services in Haldimand-Norfolk would be required to pass. This would provide for the coordinated planning of such services and, where desirable and feasible, the sharing of rights-of-way, or the application of the corridor principle in some other form.

In order to include all services, new legislation, Federal as well as Provincial, would be required. While the exact

provisions of such legislation will require careful study, it might stipulate that where a corridor was deemed desirable, any agency proposing to construct a service along that path be required to show cause why it should not be compelled to use the corridor. In practice, such authority would probably not have to be used often; the "clearing-house" procedure would almost certainly do much in itself to achieve voluntary coordination. While the necessary machinery could develop out of the existing MUSC Task Force and/or the Task Force on Air Rights and the Multiple Use and Joint Development of Transportation Corridors (with province-wide responsibility), both Task Forces are at present only study and advisory committees and neither has legal authority, funds or technical staff.

Mention has been made already of a regional airport and local airfields for private flying and business purposes.

Local Airfields

With increasing use of private aircraft for recreational travel (e.g., weekend fishing trips) and "agribusiness", local airfields are an essential part of a recreational development programme. The Study Area will probably need at least two, one in the vicinity of North Walsingham-Charlotteville and the other in Rainham, South Cayuga or Dunn. Facilities for water-based aircraft are likely to be needed soon in the Inner Bay.

Regional Airport

A *regional* airport would serve mainly freight and business aircraft and might also serve non-scheduled passenger aircraft. This function could be served by Mount Hope (Hamilton airport), with good surface transportation to the Woodhouse-Nanticoke area, depending on the future role of Mount Hope in relation to national and international air services. Otherwise, the most suitable location for a regional airport appears to be west or southwest of Hagersville, fairly close to the Woodhouse-Nanticoke area and well related to the proposed surface transportation system. (It should be noted that this combination of ground and air transportation facilities would stimulate industrial development in this area.) The main disadvantages of this location are the danger of noise effects on existing and possible future urban areas, and its closeness to Mount Hope. Siting would have to be determined by relating noise zones to existing and possible future urban areas.

Alternatives would be south or southwest of Dunnville, and at Kohler near Cayuga, but either location would be less convenient for ground connections. In all three areas there are former RCAF airfields, none of which would be adequate for modern air freighters or passenger aircraft, but any of which might serve as the nucleus of a new airport.

Pending more detailed studies, the only recommendation made is that develop-

8.7 Water Transport

ment controls be maintained in these areas to allow for future airport development.

Lack of knowledge precludes any firm proposals concerning water transportation except that the matter should be fully studied by the appropriate authority, namely the Federal Department of Transport. Both Stelco and Hydro will be heavily dependent on lake shipping, and both are consequently developing their own dock facilities. Texaco also plans to make some shipments by water. This raises at least two questions:

- a) Is it desirable to encourage, or even to allow, the continued creation of private ports along the lakeshore?
- b) Is there a need to complement these private facilities with a public harbour in the area?

A public harbour might serve several purposes, such as providing access to lake shipping for new industries, serving goods movements across Lake Erie and then overland to Hamilton and Toronto (as an alternative to the use of the Welland Canal), and providing for passenger (including recreational) travel by ferry or hovercraft. At present, these can be considered only as possibilities, but a thorough examination of future port requirements in the Nanticoke-Port Dover area (including water pollution considerations) is clearly needed. Port Maitland might also be considered in such a study, which should be carried out as part of the comprehensive transportation study already proposed. (Section 8.4.)

9/Carrying out the Plan

9.1 The Planning Process

A plan such as this must reflect the constant flux of human endeavour. There is never a "finished product" for which a blueprint can be prepared. There is, rather, a continuous process of change which can, within limits, be guided. But even the guidance can be predetermined only to a limited extent, because the nature and timing of economic, social, demographic and technological changes, and the circumstances in which they occur, are not always predictable. Planning must always involve adaptation to the unforeseen.

Good planning therefore involves two rather distinct kinds of component. One is "the plan" – a set of objectives, principles and policies to guide development and change – such as this Report is intended to provide. But these must be subject to continuous scrutiny and periodic revision in the light of changing circumstances, or the plan will inevitably become increasingly either a straitjacket, inhibiting rather than promoting development, or an irrelevance. In the case of a very general "broad-brush" plan such as this one, it must not only be kept up to date, but in many respects be developed, elaborated and refined. But above all, if the plan is to serve a useful purpose, it must be effective in governing what actually takes place. Principles and policies must be translated into decisions on specifics, and to permit such decisions to be made, procedures must be instituted through which all relevant matters can be scrutinized. The second component of effective planning, therefore, is the continuing development, review, revision and implementation of the plan: *i.e.*, the "planning process". And it is at least as important as "the plan".

The political, technical and administrative elements of the planning process together constitute what is often called the "planning machinery". It is with the future planning machinery for Haldimand-Norfolk that the next section is concerned.

9.2 The Planning Machinery: General

The second phase of the Haldimand-Norfolk Study is to deal with the restructuring of local government. Therefore, some of the recommendations concerning planning machinery deal with interim measures intended to apply only until a new system of local government comes into existence or until other recommendations emerge from phase 2 of the Study. All are tentative, therefore, as they are subject to modification by the results of phase 2. But while there may be some changes in detail (or more probably some elaboration of the recommendations) related to the proposed new structure of local government, the essential requirements will almost certainly remain. These are:

- a) area-wide coordination of Provincial programmes in the context of definite Government policies;
- b) effective *local* planning, and coordination of municipal plans and programmes at the two-county level;
- c) special machinery for the planning and development of Woodhouse New Town.

Certainly until a new local government structure comes into effect, and to a very large extent afterwards, the implementation of this plan will unavoidably remain chiefly the responsibility of the Ontario Government, for two reasons. First, the Government is directly responsible for the main physical instruments of development, highways and regional piped services, and is able to exercise a considerable measure of indirect control over private land development. Second, the municipalities would at present be quite unable to finance the capital expenditures required; nor indeed would it be reasonable to expect them to, since the needs are created by circumstances which are regional and even province-wide in their effects and implications. Many of the benefits which will be gained from the implementation of this plan will likewise accrue to a large part of the province and to some extent to all of it. Nevertheless, local involvement and cooperation will be a significant factor. The Government of Canada too will probably be involved in key areas,

such as land assembly, housing, urban renewal, and railway, harbour and airport construction. But for a long time to come the Government of Ontario will have to play the leading role.

Consequently, the first essential in implementing the plan is that its key recommendations be formally adopted as policy by the Provincial Government. Responsibility for carrying out these recommendations will then rest with the appropriate departments¹ – for example, the Department of Highways; the Ontario Water Resources Commission (for the planning and construction of area-wide systems of piped services); the Department of Municipal Affairs (for the review of local official plans and the approval of plans of subdivision); the Department of Lands and Forests (for the acquisition of land for recreation and other open space uses). Such policy decisions would also provide guidance to other Government departments and agencies which will be involved in the development process in one way or another. These include the Municipal Board; the Energy Board; the Ontario Housing Corporation; the Hospital Services Commission; Ontario Hydro; and the Departments of Energy and Resources Management, Mines and Northern Affairs, Trade and Development, and Agriculture and Food.

Although in the circumstances the Provincial Government must inevitably dominate the planning process in Haldimand-Norfolk for a long time to come, this is a necessary state of affairs rather than a desirable one. Some suggestions are made in Section 9.4 with the object of introducing some degree of local participation in the interim period before a new system of local government comes into effect. Thereafter, a stronger and more up-to-date municipal structure would be able to assume a greater degree of responsibility than the present municipalities can exercise. Without anticipating the results of the second phase of the Study, it seems at present that the pace and scale of change, coupled with the importance of the Provincial role in the Haldimand-Norfolk area, will require that local planning

¹See Preface.

9.3 New Provincial Agencies²

authority not be divided between a regional council and lower-tier units. A diffused planning machinery seems likely to be a luxury that future municipalities in the area would not be able to afford.

A word needs to be said also about the Federal role in planning for Haldimand-Norfolk. While local planning is constitutionally within the jurisdiction of the provinces, many of the responsibilities of the Federal Government are actually or potentially of great importance in planning and development. Notable examples are airports, harbours, and railways; national parks and nature reserves; cost-sharing of land assembly, housing and urban renewal programmes; and Indian reserves. The Federal Government may in the future also take a voice in deciding where certain industries should locate. Agreements with the Federal Government may well be needed in the future to resolve conflicts arising from different uses of Lake Erie, in particular, navigation, fishing and gas extraction. The cooperation of the Federal Government must therefore be sought in many respects if planning is to be fully effective in Haldimand-Norfolk. In the next sections certain specific recommendations are made for Federal participation in the planning machinery. Apart from this, it would seem desirable, after the adoption of basic policies by the Ontario Government, to convene a conference at which the Haldimand-Norfolk plan as a whole could be discussed with representatives from the appropriate Federal departments.

Within the Provincial Government itself, the present structure is not fully adequate to carry out all the recommendations of this Report, and the creation of three new bodies will be required.

The Woodhouse New Town Corporation
The planning and development of Woodhouse New Town should be the responsibility of a special Crown Corporation established by the Province with the authority and funds to:

- 1)** Prepare a detailed development plan for the townsite and for any adjacent areas which the Corporation considers should be included in the plan to allow for future growth (consideration might be given to the inclusion of the entire Nanticoke industrial area, though strictly for purposes of integrating the planning of the entire Woodhouse-Nanticoke complex), and it should be mandatory for local official plans to be amended to conform with the Corporation's development plan. On the other hand, it is essential that the latter should be required to conform to this or any subsequent duly approved area-wide or regional plan;
- 2)** Acquire, hold and use money and land for urban development, recreation, conservation, public facilities and services in accordance with the development plan;
- 3)** Develop, or administer the development of, publicly owned land; however, it is not the contention of this recommendation that the development be carried out by the Development Corporation, but largely by private enterprise;
- 4)** Engage staff and consultants.

To give the Corporation fully effective control over the development of the townsite and adjacent areas, consideration should also be given to:

²The constitution and functions of the linear services and environmental management committees recommended in this section would have to be considered in relation to the existing structure of committees and task forces operating within the Regional Development Programme.

a) providing it with special development control powers paralleling or superseding those of local planning boards and municipal councils;

b) conveying to it all lands within its area of jurisdiction owned by Provincial departments or agencies, subject to suitable terms to protect the interests of the latter.

In view of the legal and administrative difficulties involved, however, no firm recommendations are made on these two points.

Although a Provincial Crown Corporation is envisaged, local participation is important, and Federal membership would also be appropriate if the Federal Government takes a direct part in the project. The following is tentatively suggested for the initial membership of the Corporation:

A Chairman and members appointed by the Lieutenant-Governor-in-Council, chosen for relevant administrative or professional experience;

Members representing the municipalities directly concerned;

Representatives of the Federal Government if appropriate.

On the establishment of the new local government structure, municipal representation would be altered to conform with it.

At the appropriate time, residents of the new community should also be directly represented on the Corporation, and it is suggested that provision be made for such members to be added progressively as population grows. Local representation on the Corporation would in any case require review in relation to any new scheme of local government.

Some thought has been given to the relationship between the proposed development corporation and the future

regional planning agency,³ and there is obviously some risk of conflict. Consideration was given to the possibility of a single planning agency for both regional and townsite planning, but on balance this does not appear to be a workable solution. It is therefore recommended that the jurisdiction of each agency be carefully defined, on the basis that the regional authority would be in general terms responsible for the over-all pattern, scale and pace of development and for area-wide transportation planning, and the development corporation for detailed site planning and development phasing *within the framework established by the regional authority*. Special provision might nevertheless be required for conflicts to be resolved by the Minister of Municipal Affairs.

Committee to Coordinate Linear Services
The second proposed new agency has been discussed in Subsection 8.5.5 (5). It would be responsible for the coordination of all new service rights-of-way in the Study Area; but its jurisdiction would of necessity extend over a wider area. It is suggested that this area might be coterminous with the area now being studied by the Task Force on Multiple Use Service Corridors, South Central Ontario (MUSC Task Force). This area runs approximately from Lake Erie north to Highways 401 and 403 and Lake Ontario, and from the west end of Elgin County to the Niagara River.

The agency might consist of representatives of the Departments of Municipal Affairs, Treasury and Economics (Regional Development Branch), Highways, and Labour (Energy Branch), and Ontario Hydro and OWRC, with an advisory committee representing the counties and the private transportation and utility companies. It would require its own technical staff. Experience has shown that an interdepartmental committee without such staff is unable to deal adequately with the complex questions that arise in connection with the location and coordination of different kinds of service rights-of-way.

³This term is used for convenience to apply to any agency holding general area planning jurisdiction in the future.

To provide for the enforcement of regional right-of-way plans where necessary, legislation should be introduced giving suitable powers to the Municipal Board, the Energy Board, or to any appropriate agency constituted under the Regional Development Programme.

Archives (Historical Branch), and Treasury and Economics, and the OWRC. Inclusion as full or advisory members of appropriate Federal departments and non-governmental organizations, provincial and local, should be considered.

The Environmental Management Committee

Finally, a second interdepartmental agency should be constituted, essentially to pursue the recommendations of the Chanasyk Report. (This has already been recommended by the interdepartmental Environmental Appraisal Steering Committee.) While the Chanasyk Report, and the recommendations of Chapter 7 of this Report, deal in a general sense with the physical (natural and man-modified) environment, they encompass subjects as disparate as agriculture, water supply, wildlife management, mineral extraction and historic buildings. Each of these (and others) is the concern of a different Government department, yet they must be dealt with together if the objective of good comprehensive environmental management is to be attained. The Environmental Appraisal shows the way to a great pioneering achievement in ecological planning and the protection of natural and cultural resources. But success depends on a broad cooperative effort which cannot be achieved without to some extent overriding narrow departmental responsibilities.

The establishment of an environmental management committee at a responsible level to coordinate the work of the relevant departments is therefore essential. Such a committee would not appear to supersede or conflict with any agency now operating under the Regional Development Programme, since (like the proposed committee to coordinate linear services) it would be concerned with furthering a particular aspect of the programme in detail.

The following membership is recommended for the committee: Departments of Agriculture and Food, Energy and Resources Management, Health, Lands and Forests, Mines and Northern Affairs, Municipal Affairs, Public Records and

9.4 Costs

The first response to a plan, not unnaturally, is often, "What will it cost?" Indeed, no plan can be considered realistic unless some attention is given to its financial implications. But it is not always appreciated that very often the expenditures, or most of them, would be incurred anyway; the plan in fact merely permits such expenditures to be made more systematically and more effectively. So it is in this case. The real question is one of comparative costs. That is, not "What will the plan cost?", but "What are the advantages and costs of development with the plan compared with those without it?" At present this question cannot be answered with any exactness; but it is reasonable to expect that the costs will be less, and the advantages greater, if the plan is followed.

To elaborate, the public expenditures which will be incurred as industrial and urban growth take place in Haldimand-Norfolk can be divided into three classes: those which are extrinsic to the plan, those which can be substantially affected by it, and those which arise from its recommendations.

1) Extrinsic costs refer to those expenditures which arise inevitably from development within or outside the Study Area. These expenditures are only marginally affected by the plan itself. Using highways as an example, some additional initial cost may be incurred by changing the route of a highway to avoid a potential future urban development area; but on balance, long-term savings are the likely result of coordinating rights-of-way with other services and of protecting and acquiring them in advance of need.

2) Costs incurred with or without the plan but substantially affected by it. The best example of these is urban development, which involves large expenditures on water supply, sewerage, schools and a variety of other services. Without a comprehensive plan to govern the location and phasing of such growth, the costs are likely to be much higher than they need be. The proposals in this Report have been devised quite specifically to secure economies in servicing costs. The best example is the recom-

mended site of Woodhouse New Town, chosen to a large extent (though not entirely) because it is relatively economical to provide with water and sewerage. Other recommendations on urban development have been made on a similar basis. Thus, the net effect of the plan should be to minimize expenditures of this nature.

3) Costs arising directly from plan proposals are, principally, three: the acquisition of the Woodhouse townsite; the acquisition of lands for recreation, conservation and similar purposes; and the provision of special financial assistance for certain purposes.

The initial cost of townsite acquisition would unquestionably be high, probably at least \$15 million, though the entire site may not need to be acquired at one time. However, two considerations should be mentioned here. In the first place, as a way of ensuring that the right site is developed and properly planned, its acquisition will almost certainly secure long-term savings in the provision of services and avoid the need to acquire land for public purposes at much higher cost later. Secondly, while this is not the purpose of the recommendation, the expenditure will almost certainly prove a good long-term investment. The New Towns of the United Kingdom, for example, which originally involved very high capital expenditures on the part of the British Government, are now returning substantial dividends.

This would not, of course, be true of lands acquired for recreation, conservation and similar purposes, at least not directly (though the economic significance of tourists and vacationers should not be overlooked). Such expenditures must be viewed as part of the cost of providing a good living environment, not just for the people of Haldimand-Norfolk, but for most of the citizens of Ontario. The proposals made in this Report are comparable to those of the 1968 *Niagara Escarpment Study*, which recommended the preservation of the Escarpment, at an estimated cost of \$31.5 million, for the benefit of the people of the province. They are consistent too with the Government's intention, stated as long ago as 1962, "to acquire parts of the shoreline

of the Great Lakes and . . . other needed lands, so as to provide for future park and recreational needs, reforestation of the idle lands, public hunting and fishing areas, and orderly commercial developments, with multiple-use management being stressed."⁴

The general level of public capital expenditure is going to be very high for a long time to come. The present municipal tax base is very small in relation to the demands which rapid growth will impose upon it. Without assistance it will be beyond the capacity of the municipalities to make adequate provision for local services (sewers, water distribution systems, schools, parks, etc.). However, since the burden will arise from economic growth which benefits the province as a whole, they should not be expected to. Reform of municipal government may help by distributing revenues from industrial assessment over a wider area, but this in itself is unlikely to solve the problem, certainly not in the critical early years. Therefore, to ensure that the necessary infrastructure is provided for future growth, special Provincial assistance will be needed in the form of grants, loans and cost-sharing arrangements, or direct assumption of some municipal costs. There are recent precedents for this. For example, a \$1 million grant was made to Bruce County municipalities in 1970 to help offset costs incurred in the construction of the Bruce Generating Station, and in the same year the OWRC financed an increase in the capacity of the Nanticoke Generating Station water intake to provide for a future regional water supply system.

What must be stressed, however, is that these expenditures will arise from growth, not from the plan, even though this Report recommends that they be shared by the Province. The issue is not really one of planning at all; it is a question of whether or not adequate services are to be provided, and if so, from which public purse the money is to come. Somewhat similarly, the recommendation that farmers be given special

⁴Speech from the Throne, Legislative Assembly of Ontario, November 27, 1962.

9.5 Interim Measures

assistance if necessary is based simply on the inescapable fact that – plan or no plan – most farm-land in the two counties will, for the foreseeable future, either be farmed or become derelict. It appears more sensible to make investments to put farming on a sound economic footing than to allow the land to be abandoned or to support marginal agriculture.

Whether or not they arise out of the plan itself, the various measures discussed in this Report will be costly. Therefore, the step which should be taken immediately is the preparation of a long-range capital needs forecast (this should not, however, delay urgent expenditures). The forecast would necessarily be approximate, as the magnitude and timing of some costs could be established only generally. But it would assist greatly in establishing priorities and in preparing a programme of land acquisition, and also in determining a suitable allocation of costs among the three levels of government.

With the completion of this Report the emphasis of the Haldimand-Norfolk Study will shift to examining the structure of local government. With the completion of this phase in 1972, the original task of the Study will be ended. It seems unlikely that a new local government structure can be in effect before 1974, and it could be much later. Thus there could be a period of perhaps several years during which the planning process for the Study Area is effectively at a standstill. Yet this will be a key period in the area's growth, since it will be during this time that new industrial construction will actually be getting under way at Nanticoke, and many kinds of development pressure will be building up. Therefore, neither Haldimand-Norfolk nor the Province can afford an indefinite hiatus in the planning programme. Some kind of interim arrangement must be made to ensure that it does not occur.

There are actually two aspects to the continuation of the planning process. The first is the extension and review of the plan itself. As already pointed out, the present document is no more than a first step. Apart from keeping the plan as a whole under review to ensure that it remains up to date, there are many aspects which require more detailed work to refine the general policies recommended in this Report, and to bring forward new recommendations on matters which are here touched on only lightly or not at all. Poor planning and design in detail could almost entirely undo the benefits of a sound over-all development concept. It is also extremely important to continue and expand the work, started by the HNS, of data collection and storage: for example, extending data compiled on assessment records and storing it. Unless this is done, later planning work will be seriously hampered by the lack of historical information necessary to determine trends and changes over time.

The second aspect is to ensure that the plan as adopted is put into effect. Since this relates largely to Provincial programmes, the need is mainly to ensure that policies approved by the Provincial Government are actually carried out by its departments and agencies, including

the proposed Woodhouse New Town Development Corporation. This is not in any way a reflection on the various arms of the Provincial Government. In any very large and complex organization there is inevitably a danger that broad policy decisions made at the top will not always be reflected in the actions taken in the field, due to inadequate communication, insufficient coordination, misunderstanding or any of a dozen other reasons. The best safeguard against this kind of problem is the existence of a "watchdog" or coordinator whose business is specifically to ensure that the necessary programmes are in fact initiated and carried through, and to report progress periodically to all concerned.

Such a position is particularly needed in the case of Haldimand-Norfolk because of the number of agencies involved in planning implementation and the consequent imperative need for effective coordination, not only among government departments but also among inter-departmental committees, a Development Corporation and thirty local and county municipalities, and between the Provincial agencies and the local municipalities. In fact, while described as "interim", this function will probably continue to be needed even after the new local government structure comes into effect, since it is concerned mainly with the Provincial rather than the municipal level of government. Its importance can hardly be overstressed. It is essential that the implementation of the plan be continuously supervised by a person who is both "on the spot" and in a position to intervene effectively whenever the process breaks down or goes off course. The success of the plan could well depend on this.

The coordinator would have two other very important functions. Since the precise timing of the major steps in the total development process cannot be foreseen, continuous monitoring of the changing situation will be essential so that needs can be anticipated and signalled at the appropriate time. These might include measures to meet an impending housing shortage, or a start on firm plans for new roads or regional

services, or beginning the development of Woodhouse New Town. The third role would be to act as a channel of communication between the Government and the people, keeping the latter informed of the intentions of the former and the Government, in turn, informed of the views and reactions of the citizens – a procedure which has been of great value in the preparation of this plan.

There are several possible ways in which the two functions of "planning" and "coordination" might be pursued.

1) By modifying the present Haldimand-Norfolk Study into an advisory planning agency to serve until a new system of municipal government is established. This would keep the planning process in the hands of a group with good access to the various Provincial departments, yet somewhat distinct from the Government, and with a record of knowledge and interest in the Study Area and closely identified with it. On the other hand, while the position of the HNS as a quasi-independent "task force" outside the normal governmental structure is well suited to its current responsibilities, it would be less appropriate for carrying on a continuing, partly administrative programme for an indefinite period.

2) By establishing a special field office of either the Community Planning Branch of the Department of Municipal Affairs, or of the Regional Development Branch of the Department of Treasury and Economics. The advantages and disadvantages of this method would be roughly the converse of those of extending the HNS: better administratively but probably worse in terms of "image". A departmental field officer might also experience greater difficulty in acting as an interdepartmental coordinator and "expediter".

3) By the establishment of a two-county joint planning board, with financial assistance to permit the engagement of an adequate professional and technical staff. This method would have two advantages. It would give the counties themselves the effective role in the planning process that they ought to have, and it would give them experience in

sharing responsibility as a prelude to possible "regional" government. On the other hand a local planning board could not effectively assume responsibility for the coordination of Provincial programmes. Furthermore, it would probably not be in existence long enough to serve a really useful purpose in view of the likely imminence of a new local government system.

4) By providing the present Joint Study Committee with professional and technical assistance, either through financial aid or by secondment. There is little to recommend this. Since the Committee has no legal status, the counties would not gain a responsible share in the planning process (they could not, for example, adopt an official plan) and administrative difficulties would be involved in engaging staff, especially as the Committee is subject to annual reappointment. This method would therefore involve more disadvantages and fewer advantages than the formation of a joint planning board.

On balance, the best course of action would probably be the establishment of a temporary "Haldimand-Norfolk Planning Service" to serve the technical planning function, coupled with the appointment of a Provincial area coordinator.

It is important that an early decision be made on the means of continuing the planning process until the advent of a new local government structure. Otherwise, this process may be interrupted at a critical stage in the development of the area.

Haldimand-Norfolk will be undergoing not only rapid economic and urban growth but also concomitant demographic and social change. Serious consideration should be given therefore to the establishment of a local community development office to anticipate social needs, identify actual or potential problems and generally to do whatever possible to ease the stresses of adaptation to new conditions. Such an office could also be extremely helpful in the planning process by stimulating citizen interest and participation and by helping

to inform the public.⁵ Further in-depth studies⁶ of new and changing social needs due to rapid economic change and population growth are also recommended. (Section 2.3.) Such studies will need financial assistance from senior government(s).

Another function which might be very useful is the "housing information service" (Section 5.5). The role of this service would be to aid in the provision of housing by maintaining up-to-date information on the supply of development land, building lots and dwellings, for the benefit both of builders and of prospective purchasers and tenants. Such a service could be provided by a special office but would probably be better attached either to the planning agency or to the community development office.

Finally, it should be noted that the Joint Study Committee has recommended the establishment of an interim committee to consider the policies, financing and *modus operandi* of a regional roads department. The committee would include elected and appointed local officials together with representatives of the Department of Highways.

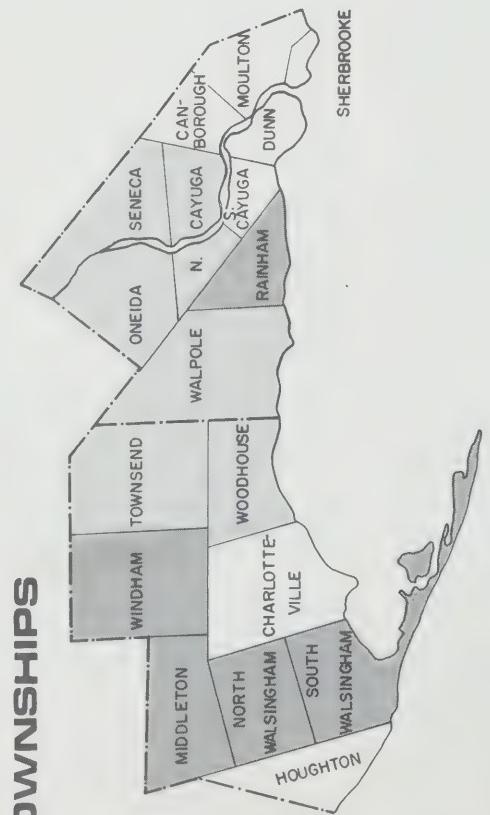
Planning for change is only as effective as the means of putting the plans into effect, and change in Haldimand and Norfolk in the coming years will be swift and far-reaching. Whatever permanent new political and administrative institutions may ultimately be created, the future well-being of the two counties will be heavily dependent on the determination and the wisdom of the policies and actions which set the course at the beginning.

⁵See Wilson A. Head, *Partners in Information*, Ontario Department of the Provincial Secretary and Citizenship, 1971.

⁶Following up the "Appraisal of Social Problems and Needs," The Planning and Resources Institute, University of Waterloo, 1970.

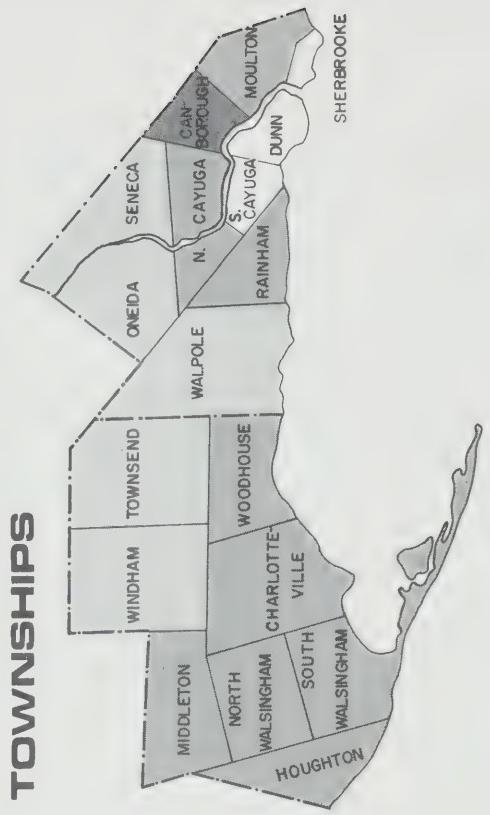
OFFICIAL PLANS

TOWNSHIPS

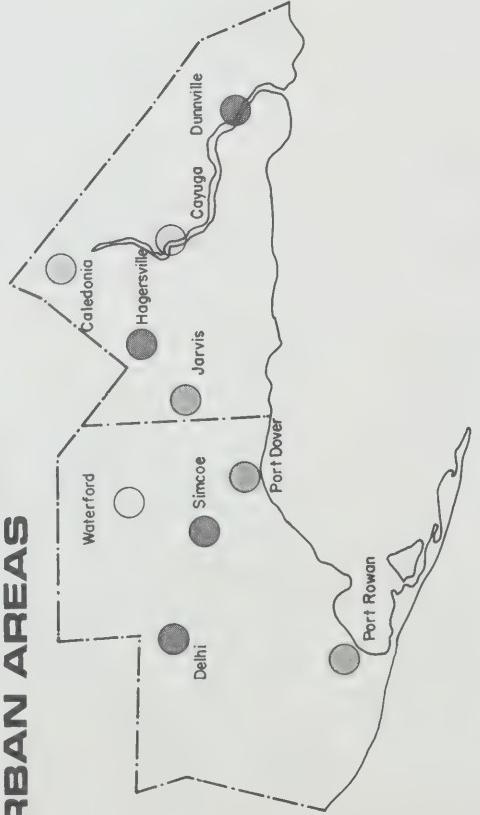


ZONING BY-LAWS

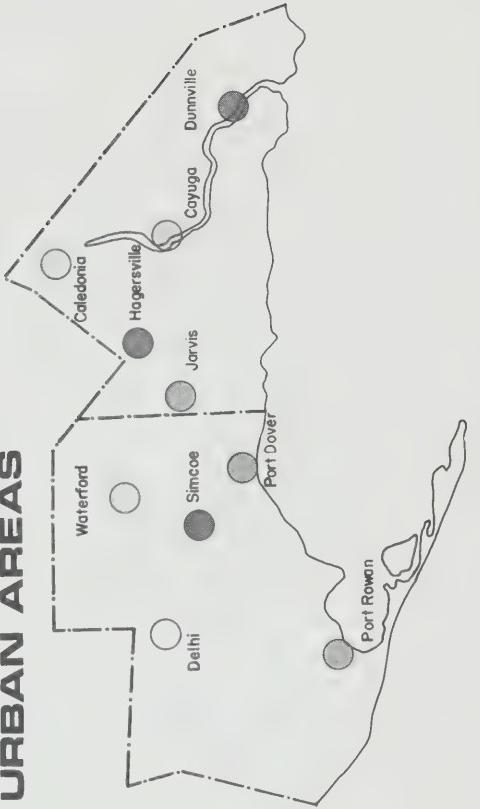
TOWNSHIPS



URBAN AREAS



URBAN AREAS



DEVELOPMENT CONTROLS

APPROVED

DRAFT OR IN PREPARATION

APPROVED BUT DATED



FIGURE NO. 11
HALDIMAND - NORFOLK STUDY

DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

Appendix A/A Comparison of Employment and Population: Projections Prepared in 1970 by the Haldimand-Norfolk Study and by Canadian Bechtel Ltd.

Theoretical Basis of Projections

Two sets of population projections were produced in 1970. One appeared in the first report of the Haldimand-Norfolk Study, *Towards a Land Use Plan for Haldimand Norfolk*, and the other was prepared by Canadian Bechtel Limited. These will be referred to respectively as the HNS 1970 projections and the Bechtel projections. Both assumed that "export industries" or "basic industries" determine the over-all development of the area's economy. In this context, basic industries include manufacturing and all other economic activities serving markets outside the Study Area. At the same time they affect local (non-basic) needs, and the local market represented by the residents of the area itself.

All the new large-scale industries in the vicinity of Nanticoke will be export or basic industries created by market needs outside the Study Area. They all (and particularly Stelco) may attract associated industries, mainly metal fabricators which would also be largely export-oriented. All projections involve certain assumptions about the scale of these

associated developments. The scale of the export industries having been determined as accurately as possible, local needs are calculated based on the size of the local labour force and the assumed level of urban services (shopping, entertainment, higher education, etc.) required within the Study Area. The more highly urbanized an area is, the higher will be the proportion of its employment in non-basic (local) industry relative to basic (export) employment. Calculation of this relationship permits the level of employment in "local industry" to be estimated. When this estimate is added to jobs in export-oriented industries, an estimate of total employment opportunities may be made.

Thus, the following assumptions had to be made about the Study Area:

- The labour requirements of incoming large-scale industries;
- The level of associated development (such as metal fabricating) within the Study Area;

- The level of urban services provided locally;
- The total population supported by the labour force resulting from (a), (b) and (c).
- The level of population becoming resident within the area, as opposed to those commuting from outside it.

The two sets of employment and population projections prepared for Haldimand-Norfolk in 1970 involved somewhat different assumptions. Furthermore, the HNS 1970 projections were for five-year intervals from 1971 to 2001, whereas the Bechtel projections extended only to 1986. Beyond 1986 the Bechtel report referred only to the impact of industrial development throughout southwestern Ontario. Consequently, it is possible to compare the HNS 1970 and Bechtel projections only for the period 1971-1986. For the end of this period the Bechtel projection is much higher than that of the HNS: 224,000 people compared with 148,500. (Table A/1 and Figure A/1.)

Table A-1/Comparison of Projections

("Towards a Land Use Plan"/Bechtel)

R e f.	Units or ref.	HALDIMAND-NORFOLK									
		1966 ¹		1971 ²		1976		1981		1986	
		"T"	B	"T"	B	"T"	B	"T"	B	"T"	B
1 Basic employment	000	16.9	20.1	16.6	21.9	21.0	25.5	28.1	30.3	37.7	44.4
2 Agriculture	000	10.8	10.5	10.5	10.2	10.2	9.8	9.8	9.5	9.5	8.7
3 Stelco	000	—	0.5	—	3.5	3.5	8.0	8.0	13.2	14.9	27.0
4 "Established"	000	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
5 "New"	000	—	3.0	—	2.1	1.2	1.6	4.2	1.5	7.2	2.6
6 Non-basic employment	000	7.5	8.6	7.5	11.7	13.2	18.2	22.1	26.3	39.8	49.0
7 "Established"	000	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
8 "New"	000	—	1.1	—	4.2	5.7	10.7	14.6	18.8	32.3	41.5
9 Total Employment	000	24.4	28.7	24.1	33.7	34.2	43.7	50.2	56.5	77.5	93.4
10 Unemployed	000	1.0	0.5	1.0	0.3	1.0	0.6	1.6	1.0	2.4	2.0
11 Commuters – out-net	000	4.3	2.0	4.3	—	1.0	-2.0	—	-2.5	—	-3.0
12 Labour force	000	29.7	31.2	29.4	34.0	36.2	42.3	51.8	55.0	79.9	92.4
13 POPULATION	000	80.6	84.6	81.0	93.8	101.0	118.4	145.0	148.5	224.0	282.9
<i>Indices</i>											
14 Labour force multiplier	(13/12)	2.71	2.71	2.75	2.76	2.80	2.80	2.80	2.70	2.80	2.59
15 Total employment/ Basic employment	(9/1)	1.44	1.43	1.45	1.53	1.63	1.71	1.79	1.87	2.06	2.10
16 Population/ Non-basic employment	(13/6)	10.75	9.83	10.8	8.01	7.65	6.50	6.56	5.66	5.63	5.77

¹Dominion Bureau of Statistics, 1966 Census of Population, and HNS estimates.

²HNS estimates.

COMPARISON OF PROJECTIONS

POPULATION 1966-2001.

(BASED ON TABLES 3 AND A/1).

LEGEND

- BECHTEL
- TOWARDS
- - - THRESHOLD OF CHANGE ALTERNATIVE 5% (TOTAL)
- - - THRESHOLD OF CHANGE ALTERNATIVE 7% (TOTAL)

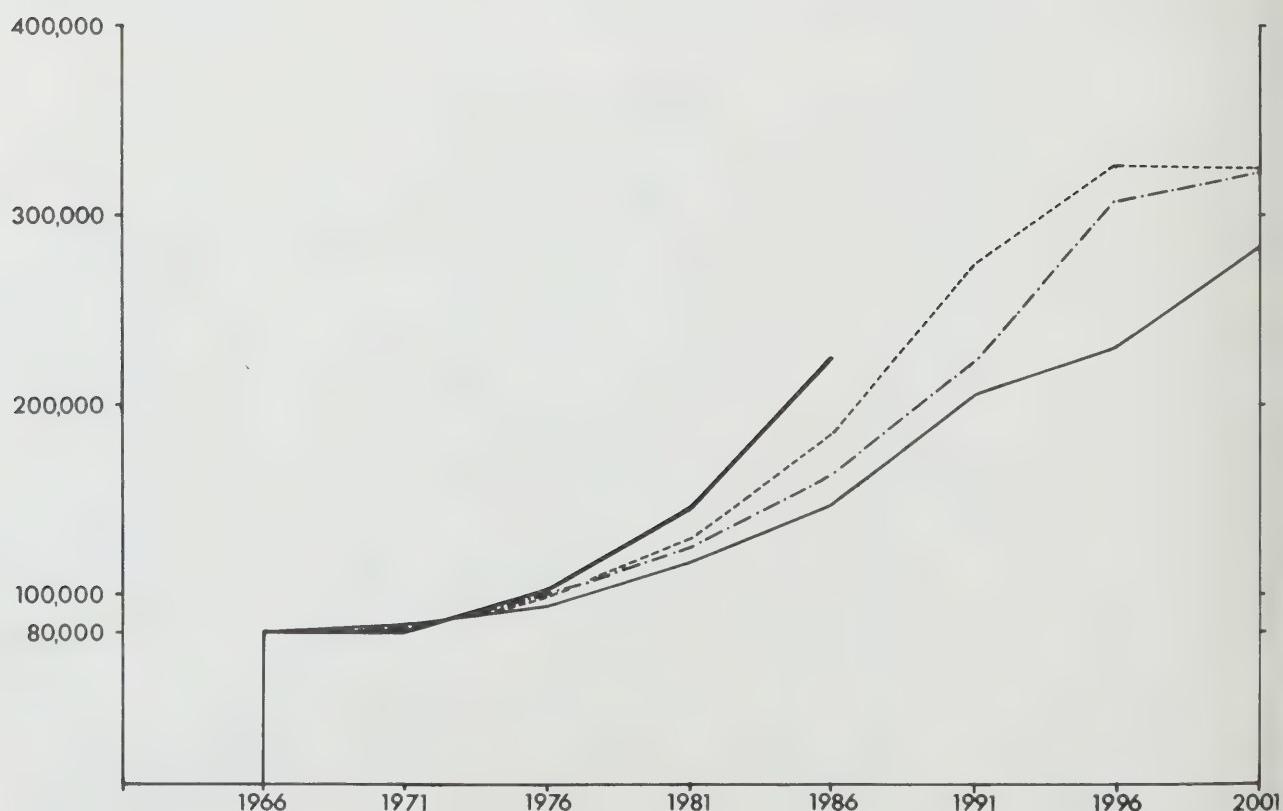


FIGURE NO-A/1
HALDIMAND - NORFOLK STUDY
DEPARTMENT OF MUNICIPAL AFFAIRS MAY, 1971

(In the following discussion, the first figure given is from the Bechtel report, with the corresponding HNS 1970 figure following in brackets.)

guidelines for the distribution of industrial growth. However, Bechtel estimated that the total over-all impact by 2001 might amount to 800,000 to 950,000 people.

The differences between the two sets of projections arise mainly from the following three factors. First, Stelco's direct employment in 1986 was put at 14,900 (13,200), though this difference is actually not very significant. Second, Bechtel assumed an employment of 7,200 (1,450) in other new basic industries, mainly metal fabricating, because they expected Stelco's industrial park to attract this kind of development quite rapidly. The HNS 1970 projections, however, did not allow for a corresponding expansion, due to assumed limitations on the Study Area's capacity to absorb industrial development and because it was also assumed that such development would be guided by regional development policies (though so far these have not been established). The third difference lies in the estimated level of new non-basic (local) industry. The desirability of a higher level of urban services is accepted equally in both studies, but the HNS 1970 projections involve some reservations about the ability to provide for such services at the level indicated by Bechtel's figure of 39,800 (26,250). Despite the opportunities for other development created by new basic industry, the HNS regarded it as questionable whether the capacity of the construction industry and social, transportation and servicing facilities could, without creating serious problems, be expanded rapidly enough to account for the 224,000 population forecast by Bechtel. Paradoxically, it seems in these terms that a somewhat slower growth rate in basic industry could assist more rapid locally oriented development in the Study Area as long as the general economic climate is encouraging.

As already mentioned, Bechtel's long-range projection of Stelco's impact on southwestern Ontario as a whole did not specify how much this impact might be expected to affect Haldimand-Norfolk directly. It was felt this impact could not be assessed until regional development policies had been established to provide

Appendix B/Data Sheet on Industries Intending to Locate in the Nanticoke Area

Industry & Location	Acres	Cost (est.)	Capacity	Start of Production
<i>Ontario Hydro Generating Station - Nanticoke</i>	768	\$600 million plus	Output: 8 generators 500,000 kilowatts each Input: 1,400 tons coal per hour; 2 million gallons water per minute.	First generator in 1971. Full capacity by 1978.
<i>Texaco of Canada, Ltd.</i>	1,310	\$75 million	50,000 barrels per day	Soon after 1973. (Assumed for the purposes of this Report.)
<i>Walpole Twp. Oil Refinery</i>				
<i>Stelco</i>	6,600			
<i>Walpole and Woodhouse Townships</i>				
<i>Integrated Steel Mill</i>	3,600	First Phase: \$150 million plus	Unknown Full capacity 12 million ingot tons	Not committed. For the purpose of this Report, 1976 was assumed as start of production of phase 1.
<i>Industrial Park</i>	3,000	Unknown	Unknown	Unknown
<i>Dofasco</i> Port Burwell	5,000	Unknown	Unknown	Post 1990.

Appendix C/Selected Bibliography

I General Texts	II Government Publications	III Studies that Affect Haldimand Norfolk
Breese, G., et al., <i>The Impact of Large Installations on Nearby Areas: Accelerated Urban Growth</i> , Sage Publications, Beverly Hills, California.	<i>Design for Development</i> , A Statement by the Prime Minister of the Province of Ontario on Regional Development Policy, April 5, 1966.	Canadian Bechtel Ltd., <i>An Evaluation of Urban Systems, Haldimand Norfolk Study Area, Ontario, Canada</i> . Vol. I, <i>Development Potentials</i> and Vol. II, <i>Recommendations</i> , prepared for the Department of Municipal Affairs, Haldimand-Norfolk Study, 1970.
Tiebout, C. M., <i>The Community Economic Base Study</i> , Committee for Economic Development, 1962, New York.	<i>Design for Development —Phase Two</i> , Statements by the Honourable John Robarts, Prime Minister of Ontario, November 28, 1968 and the Honourable W. Darcy McKeough, Minister of Municipal Affairs, December 2, 1968.	Chanasyk, V., <i>Environmental Appraisal</i> , Vol. I and II (draft only), prepared for the Haldimand-Norfolk Study, Department of Municipal Affairs, 1970. (Final publication in production.)
	<i>Design for Development: Niagara (South Ontario) Region, Phase I: Analysis</i> (Summary and Research Document), Regional Development Branch, Department of Treasury and Economics, June 2, 1970.	Jackson, J. N., <i>Recreational Development and the Lake Erie Shore</i> , research commissioned by the Niagara Regional Development Council, undated.
	<i>A Strategy for Southwestern Ontario Development</i> , A Joint Statement by the Department of Treasury and Economics and the Department of Municipal Affairs, March 17, 1970.	Jackson, J. N., <i>The Haldimand-Norfolk Study: Its Future Context</i> , prepared for the Haldimand-Norfolk Study, February, 1970.
	<i>Towards a Land Use Plan for Haldimand Norfolk</i> , Haldimand-Norfolk Study, Ontario Department of Municipal Affairs, March, 1970.	Tait, L., <i>Tobacco in Canada</i> , Sponsored by the Ontario Flue-Cured Tobacco Growers' Marketing Board, Tillsonburg, Ontario, Canada, T. H. Best Co. Ltd., 1968, Toronto.
		Reeds, L. G., <i>Nanticoke Report: A Study of the Impact of Stelco on the Farming Community</i> , Department of Geography, McMaster University, March, 1970.
		Reeds, L. G. and D. R. Maas, <i>Haldimand-Norfolk Research Report: A Study of Agriculture Resources</i> , Department of Geography, McMaster University, January, 1971.
		The Planning and Resources Institute, University of Waterloo, <i>An Appraisal of Social Problems and Needs in the Haldimand-Norfolk Area</i> , prepared for the Haldimand-Norfolk Study, December 31, 1970.
		Paterson Planning and Research Ltd., <i>Haldimand-Norfolk Housing Needs: A review of housing requirements in the Counties of Haldimand and Norfolk for the period 1971-1981</i> , December, 1970.
		Agnew, Peckham and Associates, Ltd., <i>Role Study, Norfolk General Hospital, Simcoe and the West Haldimand General Hospital, Hagersville</i> , December, 1970.



HALDIMAND-NORFOLK STUDY

TRANSPORTATION & SERVICE CORRIDORS

LEGEND

Freeway



Future Freeway (Schematic Only)



Other Main Roads



Transmission Lines
Nanticoke - Middleport



Railways



Railway Yard



Airport



Service "Corridor"



Port Facilities Study



Expressways



Main Roads



Railways



Stelco



Hydro



Texaco



HALDIMAND-NORFOLK STUDY

GENERAL PLAN

LEGEND

Existing Towns and Villages



Natural Amenities



Major Urban Development - Initial
(Lynn)



Lynn and Nanticoke Industrial Areas



Resort/Recreation Centre



Major Roads



Future Freeway (Schematic Only)



Parkway System



Airport



Harbour



Expressways



Main Roads



Railways



Stelco



Hydro



Texaco



